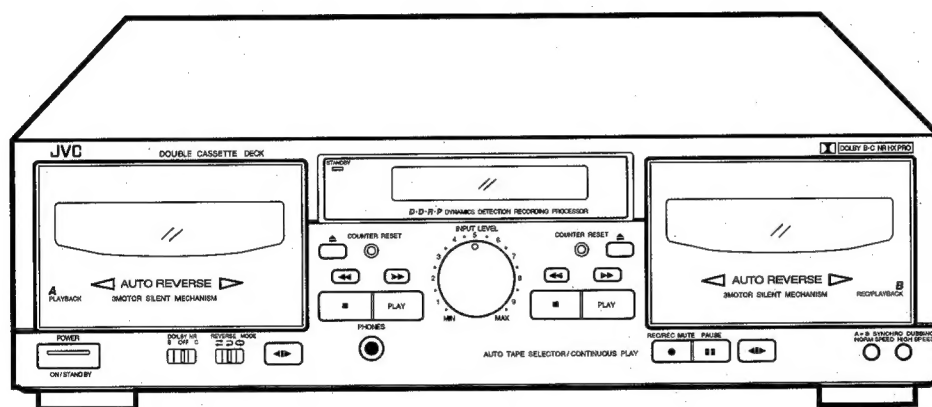


JVC

SERVICE MANUAL

DOUBLE CASSETTE DECK

TD-W217TN _{C/J}
TD-W218BK _{A/B/E/EN/G/U/UT}



COMPU LINK
Component

Area Suffix

A	Australia
B	U.K.
C	Canada
E	Continental Europe
EN	North Europe
G	Germany
J	U.S.A.
U	Other Areas
UT	Taiwan

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■ Safety Precautions

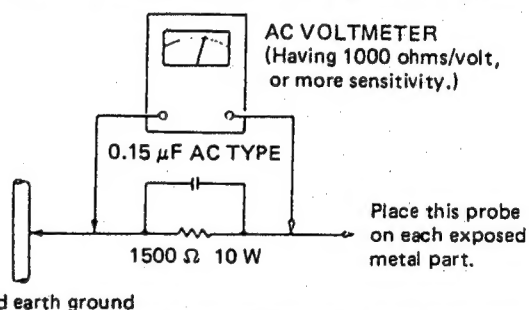
1. The design this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacture's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety — related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of service manual. Electrical components having such features are identified by shading and (Δ) on the schematic diagram and by (Δ) on the parts list in the service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after reassembling.
5. Leakage current check (Electrical shock hazard testing)

After re — assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock. Do not use a line isolation transformer during this check.

- Plug the AC line cord directly into the AC outlet. using a "Leakage current tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC(r.m.s.)

• Alternate check method

Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 ohms 10W resistor paralleled by a 0.15 μ F AC type capacitor between an exposed metal part and a known good earth ground. Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each

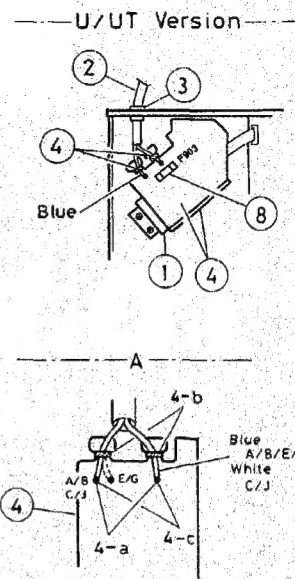
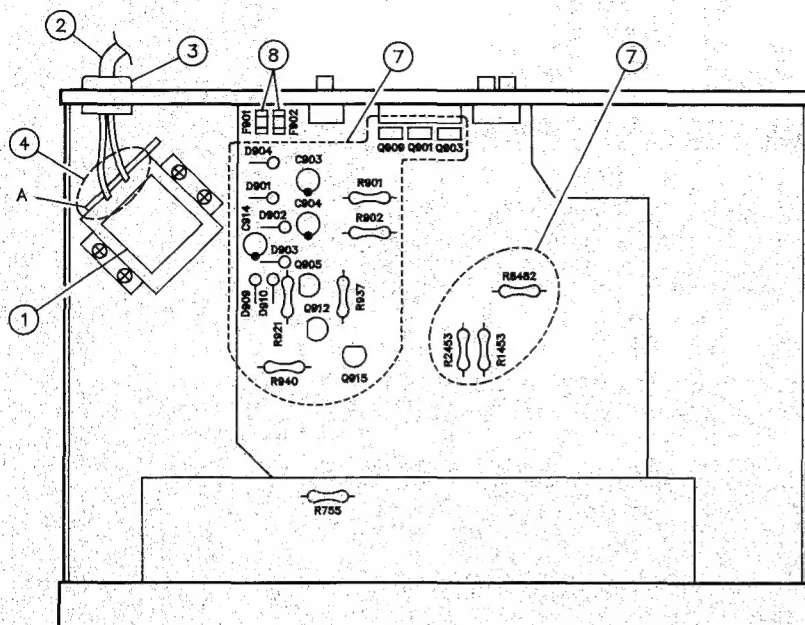


exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC(r.m.s.). This corresponds to 0.5mA AC(r.m.s.).

◆ Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

◆ Important Management Points Regarding Safety (Items Demanding Special Safety Precautions)



1. Securely fix the power transformer while confirming its marking specified in the following.

Suffix	Marking	Description	Model
J	5216507	UL approved No.	TD-W217
C	VTP52A5-011F		TD-W217
A/B/E/EN/G	VTP52Z5-011F		TD-W218
U/UT	VTP54G5-001F		TD-W218

2. Power cord : Make sure of the following markings and inspect exterior scratch and damage.

	Power cord	Attachment plug
J	SPT-1	KP-10W or SU-1P
C	SPT-1	KP-10W or SU-1P
E/EN/G	<VDE>	KP-419C or SE-1
B	BASEC BS6500	KP-610 3A
U/UT	<VDE>	KP-8H
A	LTSA-2F	KP-560

3. Install the cord bushing by the specified tool while confirming the marking. Bushing : NIFCO 2271

4. Wiring terminal

- When installing the power cord, wind it around the terminal by the end before soldering.
- Arrange the wires while binding them nearby the terminal.
- The end of respective power cords is soldered in the air and the space from others must be 3.2 mm or more in the distance.

7. Since the following parts are heat generation ones, they must not contact with electrolytic capacitors, wires, etc.

- Parts in parentheses () are inflammables. Make sure of their lift-up condition for the purpose.
- Parts in box are out of JVC's control.

D901 D902 D903 D904 D909 D910 Q901 Q903 Q905 Q909 Q912 Q915 R901 R902 R921 R937 R1453 R2453 R8482 R940 R755 C914

Other parts

C903 C904 2200uF/25V C/J version (VENT TYPE)

8. All fuses must securely be connected. In A/B/E/EN/G/U/UT version, F901 and F902 must be specified by the rating of 800 mA shown on the surface as well as by the marking of ⑤ or in U/UT version, F903 must be specified by the rating of 315 mA shown on the surface as well as by the marking ⑤ or ⑥.

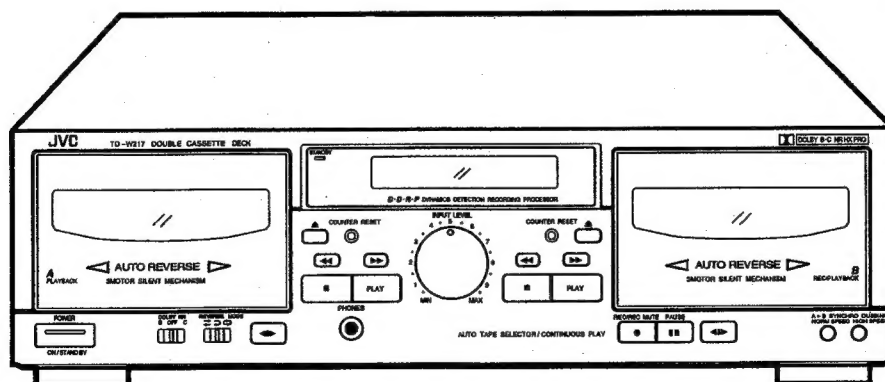
JVC

INSTRUCTIONS

TD-W217/W218_{A/B/J}

DOUBLE CASSETTE DECK

COMPU LINK
Component



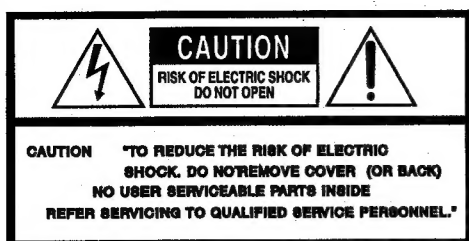
The only difference between models TD-W217 and TD-W218 is cosmetic one.

For Customer Use:

Enter below the Model No. and Serial No. which are located on the rear of the cabinet. Retain this information for future reference.

Model No. _____

Serial No. _____



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

IMPORTANT (In the United Kingdom)

Mains Supply (AC 230 V~, 50 Hz only)

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.

BE SURE to replace the fuse only with an identical approved type, as originally fitted and to replace the fuse cover.

If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:



Blue to N (Neutral) or Black

Brown to L (Live) or Red

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IF IN DOUBT-CONSULT A COMPETENT ELECTRICIAN.

Please study this instruction manual carefully before starting to operate the unit, in order to use the unit correctly. We take no responsibility for any problems resulting from misuse of this unit by operating this equipment other than instructed in this manual.

WARNING (In the United Kingdom)

Pre-recorded tapes, records or discs should not be re-recorded without the consent of the owners of copyright in the sound recording and in any copyright musical or literary work embodied in that recording as this constitutes an infringement of copyright.

INFORMATION (FOR U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by

turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INTRODUCTION


Thank you for purchasing JVC product. Read this instruction book carefully before operating to be sure of getting optimum performance and longer service life from the unit.

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FEATURES

- Double cassette mechanism for recording/playback and playback**
Recording/playback mechanism in deck B and playback mechanism in deck A both with reverse head system.
- Full logic mechanism**
- Dolby* HX PRO headroom extension**
- Dolby B & C noise reduction system**
- DDRP (Dynamics Detection Recording Processor) compatibility**
The DDRP function is possible only when used with a suitable JVC CD player.
- 2-color FL peak level indicator**
- Digital tape counter respectively for deck A and deck B**
- Synchro start (normal-/high-speed) dubbing**
- Auto tape select mechanism (decks A and B)**
- COMPU LINK-3 compatible**

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen. "Dolby", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

COMPU LINK Control System

COMPU LINK control system is the convenient system using COMPU LINK-3/SYNCHRO terminals on the rear panel. (See pages 4 and 8.)

CAUTIONS

1. Prevention of Electric Shocks, Fire Hazards and Damage

- Even when the POWER switch is set to STANDBY, a very small current will flow. To save power and for safety when not using the unit for an extended period of time, disconnect the power cord from the household AC outlet.
- Do not handle the power cord with wet hands.
- When unplugging from the wall outlet, always grasp and pull the plug, not the power cord.
- Consult your nearest dealer when damage, disconnection, or contact failure is found with the cord.
- Do not bend the cord sharply, or pull or twist it.
- Do not modify the power cord in any manner.
- Do not remove screws to disassemble the unit and do not touch anything inside the unit.
- AC power cord (For U.S.A. version only)**
The AC power cord of this unit has certain one-way direction connections to prevent electric shock. Refer to the illustration for correct connection. (Fig. 1)

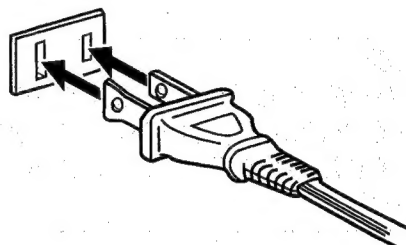


Fig. 1

- Do not insert any metallic objects into the unit.
- Unplug the power cord when there is a possibility of lightning.
- If water gets inside the unit, unplug the power cord from the outlet and consult your dealer.
- Do not block the ventilation holes of the unit so that heat can escape. Do not install the unit in a badly ventilated place.
- Be sure to unplug the power cord from the outlet when going out or when the unit is not in use for an extended period of time.

D·D·R·P DYNAMICS DETECTION RECORDING PROCESSOR

This product can be combined with a DDRP (DYNAMICS DETECTION RECORDING PROCESSOR) system (compact disc player + cassette deck, etc.) to enable setting the optimum recording level automatically. Refer to these instructions for details.

2. Installation

- 1) Avoid placing the unit on or adjacent to an amplifier, to prevent hum from being produced by some types of amplifiers. Move the unit to a place not affected by the amplifier. Keep the unit as far as possible from a TV set.
- 2) Avoid installing the unit in a location subject to ambient temperatures exceeding 40°C (104°F) (e.g. direct sunlight, near heaters, etc.) or less than 0°C (32°F), excessive humidity, dust or vibrations.
- 3) If this set is moved suddenly from a cold place (0°C) to a warm place, it may not function properly because of moisture generated inside the unit. The unit will function properly 30 minutes after being moved.

3. Cleaning the cabinet

Never use benzine or thinner for cabinet cleaning as they may damage the surface finish.

4. Cassette tape

- 1) Loose tape may become tangled in the tape transport mechanism. Remove slack by winding the tape with a pencil. (Fig. 2)

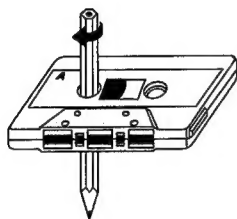


Fig. 2

Turn the pencil to tighten the tape.

- 2) The use of C-120 (120 minutes turn around) or thinner tape is not recommended, since characteristic deterioration may occur.
- 3) To prevent recordings from being erased accidentally, remove the tab(s) with a screwdriver. Reseal the slots with adhesive tape to erase and re-record after the tabs have been broken off.

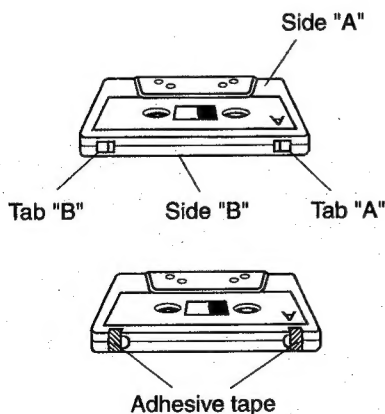


Fig. 3

- 4) Do not store cassette tapes where there is a magnetic field (e.g. near a TV, etc.) or in a place subject to high temperatures or humidity.

5. Auto tape select mechanism (decks A and B)

This deck has an Auto Tape Select mechanism which distinguishes between different types of tape from holes in the cassette. After the type of tape has been detected, bias and equalization are set to be suitable for the tape.

- Cassettes with the detection holes:
Metal tape (EQ: 70μs)Type IV
CrO₂(chrome) tape (EQ: 70μs)Type II
 - Cassettes without the detection holes:
Normal tape (EQ: 120μs)Type I
- Some earlier types of metal and CrO₂ (chrome) tapes may not be provided with the detection holes. Avoid using such tapes, since correct equalization characteristics cannot be obtained. Also do not use ferrichrome tapes whose characteristics do not match this unit.

CrO₂ tape detection holes



Metal tape detection holes

6. Operations

- 1) When the POWER switch is turned ON or STANDBY with the deck set to the playback or recording mode, noise may be generated. Before turning the POWER switch ON or STANDBY, confirm that the ■ (stop) button has been pressed.
- 2) Many operations of this unit are performed under the control of a microcomputer. Use the unit only after carefully studying the descriptions and cautions in each item. If operations are done incorrectly, the unit may stop functioning correctly. If this happens, turn off the power once, and then turn it on again, so that the unit can function correctly.

CONNECTIONS

- Do not switch the power on until all the connections are completed.
- Insert the plugs firmly, or poor contact will result, causing noise.
- When the pin-plug cords are employed, always connect the white plug to the left channel terminal. This helps to avoid reversed connections.
- When using the Compu Link Control System version 3, do not connect the power cord to the SWITCHED AC OUTLET of an amplifier or receiver. Otherwise, the automatic power on/off (STANDBY) function cannot be carried out.

1. Connection to a stereo amplifier

Note:

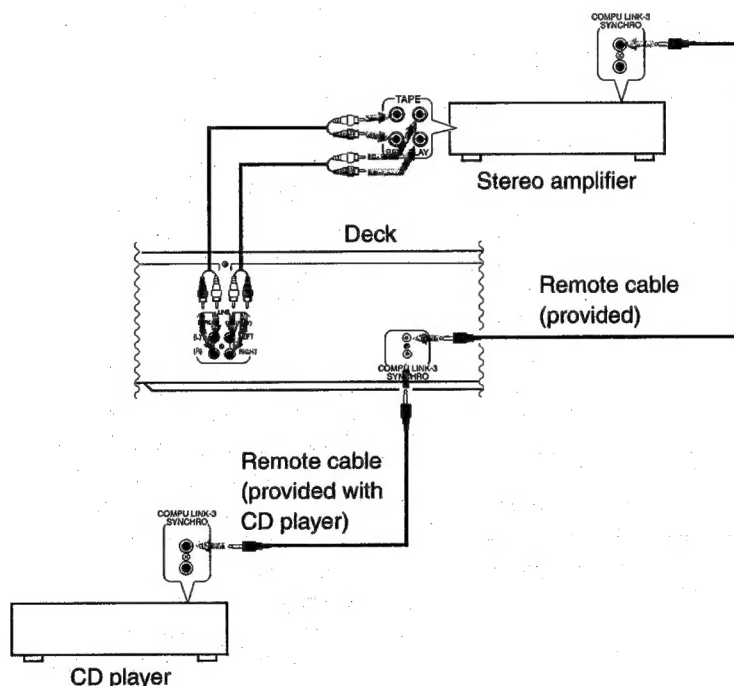
When installing the deck, be sure to install at a distance from your amplifier. If they are stacked, noise (hum) may occur.

2. Remote cable connection for COMPU LINK


- By connecting a remote cable, COMPU LINK functions (automatic power on/off (STANDBY), automatic source selection, synchronized recording and DDRP recording) can be performed. In this time the provided pin-plug cords must be also connected.
- When making synchronized recording with a CD player, connect the remote cable to the COMPU LINK-3/SYNCHRO jacks.

Notes:

- When making synchronized recordings, only a single deck should be connected to the amplifier.
- If a component is not a JVC COMPU LINK component, bypass it when making the remote cable connections.
- This deck can be connected with an amplifier and a CD player which have the COMPU LINK-1/SYNCHRO jacks for COMPU LINK performance.(see page 8 for detail)



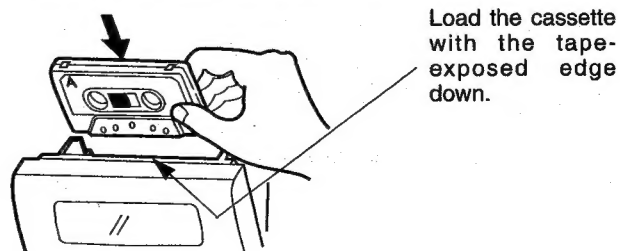
CASSETTE LOADING

- Press the  (eject) button to open the cassette holder.
- Load a cassette as shown.
- Press the cassette holder to close it.
Be sure to obtain the click sound to close the holder securely.

Notes:

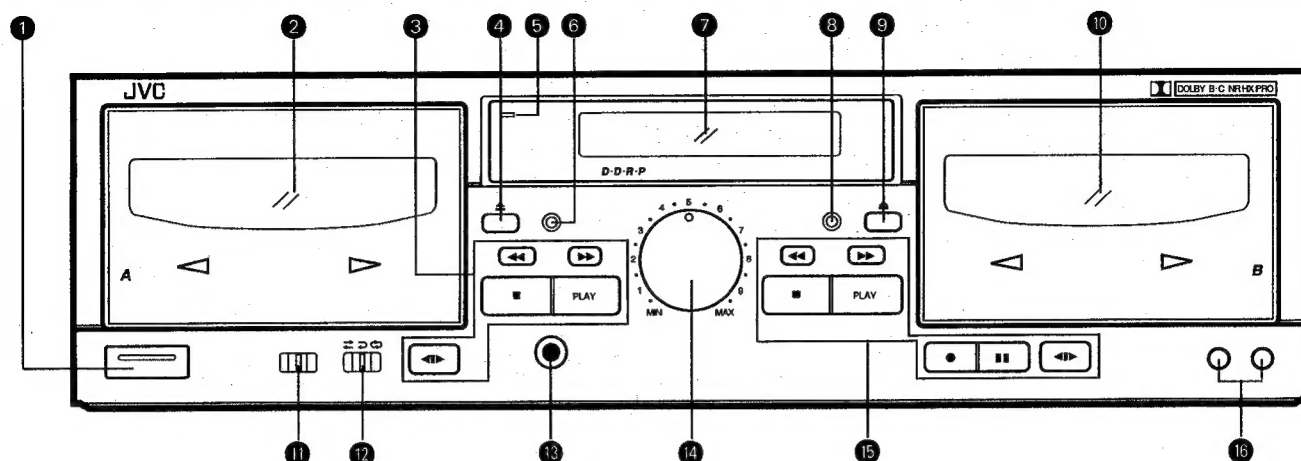
- If the power is switched off (STANDBY) while the tape is moving, you might not be able to remove the cassette. If this happens, switch the power on again before attempting to remove the cassette.

- Switching the power off (STANDBY) during playback may cause a malfunction. Always stop playback before switching the power off (STANDBY).



Load the cassette with the tape-exposed edge down.

NAMES OF PARTS AND THEIR FUNCTIONS



1 POWER switch (ON/STANDBY)

2 Cassette holder (deck A)

3 Cassette operation buttons (deck A)

- ◀◀ : Press to wind the tape quickly from right to left.
- ▶▶ : Press to wind the tape quickly from left to right.
- (stop) : Press to stop the tape.
- PLAY : Press to play the tape.
- ◀▶ direction : Press to change the direction of tape travel.

4 ▲ (eject) button (deck A)

5 Power STANDBY indicator

Lights when in the power standby mode.

6 COUNTER RESET button (deck A)

Press this button to set the digital counter to "0000". Even if the POWER switch is set to STANDBY, the counter value at that time is stored in memory.

7 Indicators

- ① DDRP indicator
 - ② Peak level indicator
- These indicators light according to the level of the signal being recorded or the level of the signal recorded on the tape.

Note:

0 dB: IEC (DIN) STANDARD LEVEL (250 nWb/m)

0 VU: Signal level at 160 nWb/m

□ : DOLBY NR STANDARD LEVEL

③ HX PRO indicator

④ Digital counter

The counter reading increases while the tape is running forward and decreases when it is running in reverse.

⑤ Mechanism mode indicators (Deck A)

- ▶▶ : This lights when winding the tape from left to right.
- ◀◀ : This lights when winding the tape from right to left.

PLAY : This lights when in the playback.

◀, ▶ : Indicates the direction of tape travel.

⑥ DUBBING : "▶" lights when the normal-speed dubbing mode.

"▶▶" lights when in the high-speed dubbing mode.

⑦ CONT : Lights when the unit is continuous play mode.

⑧ Mechanism mode indicators (Deck B)

PLAY : Lights when the unit is in the playback and record modes.

◀, ▶ : Indicates the direction of tape travel.

REC : Lights when the unit is in the record and record-pause modes; blinks during record muting.

|| : Pause indicator

▶▶ : This lights when winding the tape from left to right.

◀◀ : This lights when winding the tape from right to left.

⑨ ◀▶ : Indicates reverse mode.

⑧ COUNTER RESET button (deck B)

⑨ ▲ (eject) button (deck B)

⑩ Cassette holder (deck B)

⑪ DOLBY NR switch

Set to B or C for recording using the Dolby NR system or for playing back a tape that was recorded using the Dolby NR system.

Set to OFF when the Dolby NR system is not used.

⑫ REVERSE MODE switch

Select the single side or full record/playback mode, or the continuous play mode.

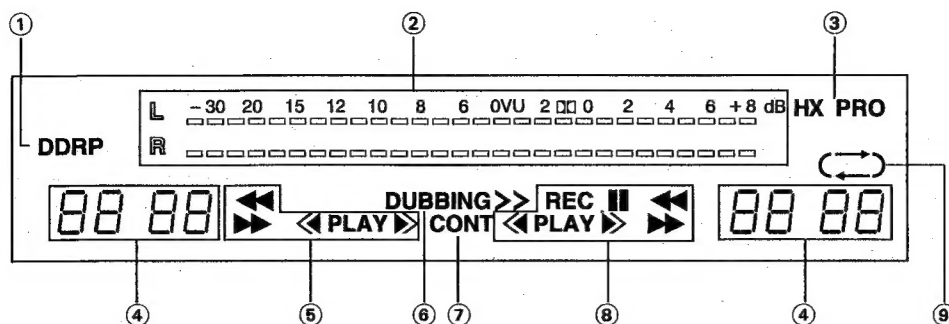
↔ : For single-side recording or playback.

↺ : To play or record both sides A and B.

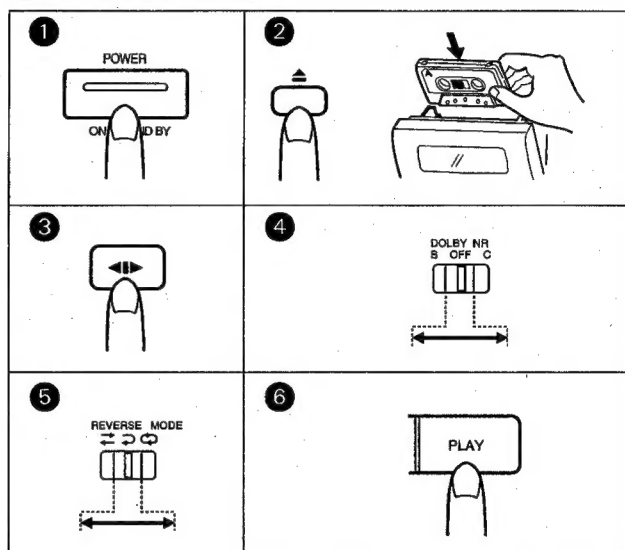
↻ : To play sides A and B continuously.

⑬ PHONES jack

Connect headphones (with an impedance of 8 Ω to 1 kΩ).



PLAYBACK



Playback of deck A

Operate in the order of the numbers in the illustration.

- ① Press the POWER switch to set to ON.
 - ② Load a prerecorded cassette with side A facing out.
 - ③ Select the side to be played back.
Side A ... Forward direction (PLAY >>)
Side B ... Reverse direction (<< PLAY)
 - ④ Set the DOLBY NR switch to the same position as when the tape was recorded.
 - ⑤ Set the REVERSE MODE switch as desired.
 - ⑥ Press the PLAY button of deck A to start playback.
- When the deck contains a tape, the deck is turned on automatically and the tape is played back by only pressing the PLAY button.

Playback of deck B

Perform steps ② to ⑥ of the above procedure for deck B.

Continuous play

First set the REVERSE MODE switch to .

Load cassette tapes in both decks and press the PLAY button of the deck to be played first for continuous play of both decks.

- At this time, the CONT indicator lights in the multimode display. When the tape in the deck which plays first reaches the end of side B (in the reverse direction), it automatically switches to the forward direction and enters the standby mode. At the same time, the other deck starts playback. These operations continue between decks A and B.

⑭ INPUT LEVEL control

⑮ Cassette operation buttons (deck B)

<< : Press to wind the tape quickly from right to left.

>> : Press to wind the tape quickly from left to right.

■ (stop) : Press to stop the tape.
Also press to stop both decks simultaneously during dubbing.

PLAY : Press to start playback/recording.

● REC/REC MUTE: Press the PLAY button while pressing this button to start recording, and press to leave an appropriate non-recorded section. (See page 8)

■ PAUSE : Press to stop the tape temporarily during recording and playback.
Press the PLAY button to release the pause mode.

◀▶(direction): Press to change the direction of tape travel.

⑯ A ▶ B SYNCHRO DUBBING buttons

Press to dub from deck A to deck B.

• NORM SPEED : Press to perform normal-speed dubbing.

• HIGH SPEED : Press to perform high-speed dubbing.

AUTO REVERSE OPERATION

The auto reverse operation of this unit turns the tape transport over to the reverse of forward direction automatically when the tape reaches its end during recording or playback.

- Because of cassette shell construction, a tape recorded in the forward direction should be played back in the same direction to obtain stable sound reproduction.
- During recording, auto reverse can be activated only from the forward to the reverse direction. For good sound quality and to avoid accidental erasure of previously recorded material, always start recording with the side A of the tape facing out.

- While one deck is playing back, the cassette in the other one can be replaced. This is convenient to the long-time playback of background music.

Note:

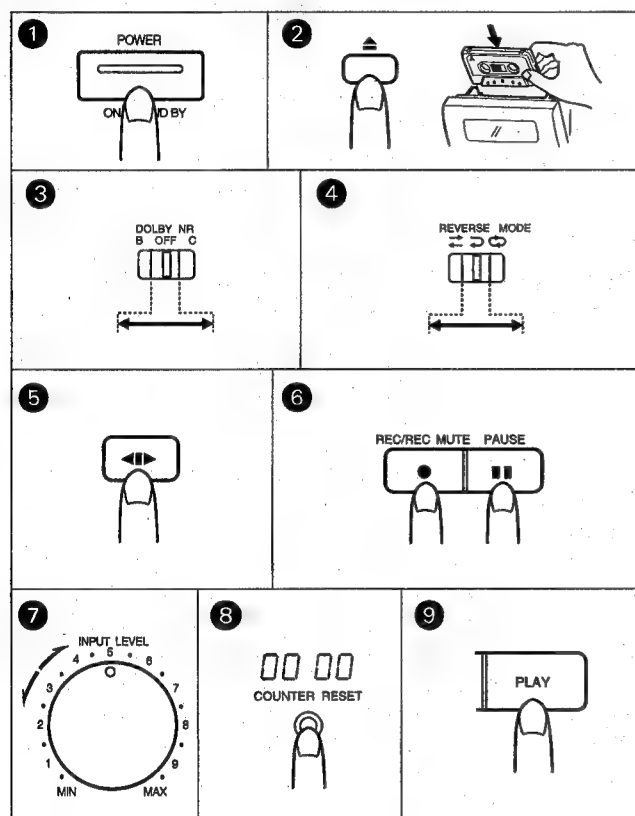
- Use tapes recorded using the same NR mode in decks A and B.

RECORDING

Deck B only

Operate in the order of the numbers in the illustration.

- Make sure the safety tab of the cassette has not been broken off.



- Press the POWER switch to set to ON.
- Load a cassette for recording.
- Set the DOLBY NR switch as required.
- Set the REVERSE MODE switch as desired.
- Select the side to be recorded.
- Press the ■ PAUSE button and ● REC/REC MUTE button (record-pause mode). REC and ■ indicators light.
- Adjust the recording level. (See the right column.)
- Press to "00 00".
- Press the PLAY button to start recording.

Notes:

- When the safety tabs are removed from a cassette tape, the tape cannot be recorded even if you try. Make sure that both tabs are still in place when performing full recording.
- When the tape is played or recorded in the reverse direction (side B), only side B is played back or recorded and then the tape stops automatically.

It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

DDRP (Dynamics Detection Recording Processor) recording

DDRP recording is performed with suitable JVC CD players and the recording level adjustment is performed automatically.

Since recording level adjustment is performed automatically for different types of tape (normal, CrO₂ and metal), the adjustment of INPUT LEVEL control is not required.

Read the instruction book of your CD player carefully.

RECORDING LEVEL ADJUSTMENT

Adjust the recording level while observing the peak level indicator indication.

For example:

With metal tape



Because of metal tape's higher saturation level, it is OK that "+ 2" lights occasionally.

With normal or chrome tape



It is OK that "+ 0" lights occasionally.

- When the recording level is too low, the hiss noise inherent in the tape will be conspicuous.
- When the recording level is too high, exceeding the saturation level, the recording will contain cracking noise and will be distorted.
- If "+4" lights too often because the recording level is too high, the recorded sound may be distorted and seem to be breaking up. If only "0" lights infrequently, the level is too low and the recording may contain tape hiss.

It is best to adjust so that the maximum sound level of the source to be recorded reaches the very limit of the saturation level of the tape to be used.

The best level varies depending on the type of music and type of tape so it is better to make a test recording, using FM music, records, etc.

AUTOMATIC RECORD MUTING (DECK B)

This facility is used to eliminate undesired sections and leave an appropriate non-recorded section.

A. To leave non-recorded sections of about 4-5 seconds automatically

1. When the undesired section comes during recording, press the ● REC/REC MUTE button and release it.
2. The REC indicator flashes and a non-recorded section is made during record muting operation.
About 4-5 seconds later, the tape automatically stops, and the unit enters the record-pause mode.
3. Press the PLAY button to start recording again.

B. To leave non-recorded sections of more than 4-5 seconds

1. Keep the ● REC/REC MUTE button pressed continuously as long as you want to make a non-recorded section. By releasing the finger from the button after the above operation, the unit enters the record-pause mode.
2. Press the PLAY button to start recording again.

C. To leave non-recorded section of less than 4 seconds

When the undesired section comes during recording.... After the ● REC/REC MUTE button is pressed, press the PLAY button before the unit enters the pause mode to start recording again, or press the ■ PAUSE button to enter the record-pause mode.

- The peak level indicator lights even during record muting according to the input level which can be heard from the speakers or headphones so that recording can be resumed at the exact point on the tape.

ERASING

When recording on a prerecorded tape, the previous recording is automatically erased and only the new program is recorded on the tape.

To erase a tape without making a new recording...

Follow the section "RECORDING" but in step ⑦, set the INPUT LEVEL control to MIN.

DOLBY NR and DOLBY HX PRO

Dolby NR System

To reduce the hiss inherent in tape recording, use the Dolby NR System when making recordings. When listening to a tape recorded with the Dolby NR System, set the DOLBY NR switch to B or C according to the system selected in the recording mode.

Note:

The sound quality will change if the positions of the DOLBY NR switch are different in recording and playback.

Dolby HX PRO headroom extension

When a source which contains many high-frequency components is recorded, these high-frequency signals have the same function as bias and therefore, the effective bias current changes.

This will result in phenomena such as changes in the level of low-frequency signal and subsequent distortion and reduction of the high-frequency saturation level.

Dolby HX PRO headroom extension system controls the bias current so that the effective bias is constant even when there are fluctuations in the high-frequency components of the input signal.

This greatly improves the high-frequency saturation level while reducing the low-frequency signal level variations and distortion.

- The dynamic sound recorded with this system sounds the same even when the tape is played back in a deck that does not have Dolby HX PRO.
- This system automatically works when in recording; however, Dolby HX PRO is not a noise reduction system.

COMPU LINK CONTROL SYSTEM

COMPU LINK Control System

The Compu Link Control System controls relative operations between components automatically and facilitates various operations.

This is a system originated and developed by JVC for facilitating various system operations. There are two versions of this system; version 1 and 3. (For version 1 components, "COMPU LINK-1/SYNCHRO" is marked on the rear panel. For version 3 components, "COMPU LINK-3/SYNCHRO" is marked on the rear panel. This unit belongs to version 3.)

The version 3 system controls relative functions between this unit and an amplifier or receiver, in addition to all of the functions of version 1.

Automatic Power On/Off (STANDBY) Function (COMPU LINK-3)

This function is available when an amplifier or receiver having a COMPU LINK-3/SYNCHRO terminal is connected. For example, if a deck contains a tape, the deck is turned on automatically and the tape is played back by only pressing the PLAY button. When the amplifier or receiver is switched STANDBY, the source unit is automatically switched STANDBY.

Automatic Source Selection (COMPU LINK-1, 3)

When the provided remote cables are used for connecting this unit to other components which have COMPU LINK-1 or 3/SYNCHRO terminals, the switch-over of all system components is possible with simple one-touch of the source selector button of JVC's amplifier or receiver.

By doing this, the corresponding component will start playing automatically.

The source select button of the remote control unit or the activation button of the desired component can be also used for this purpose. When the components have been switched over, the previous component will stop playing within five seconds.

Synchronized Recording (COMPU LINK-1, 3)

Synchronized recording refers to the process in which the deck starts recording in synchronism with the CD player. Perform the synchronized recording as follows:

1. Set the cassette deck to the record-pause mode in accordance with the recording procedures on page 8.
2. If you want the programmed recording, program the desired tunes in any order you wish to hear.
3. Press the PLAY/PAUSE button of the CD player. By so doing, the cassette deck is placed in the record mode and synchronized with the CD player for recording. Synchronized recording thus can be made possible.

DDRP (Dynamics Detection Recording Processor) recording

The DDRP function makes possible fully automatic recording when used with a suitable JVC CD player. When the DDRP button of a suitable JVC CD player is pressed, the recording level is first adjusted automatically, then recording starts; it is not necessary to start recording by the normal procedure.

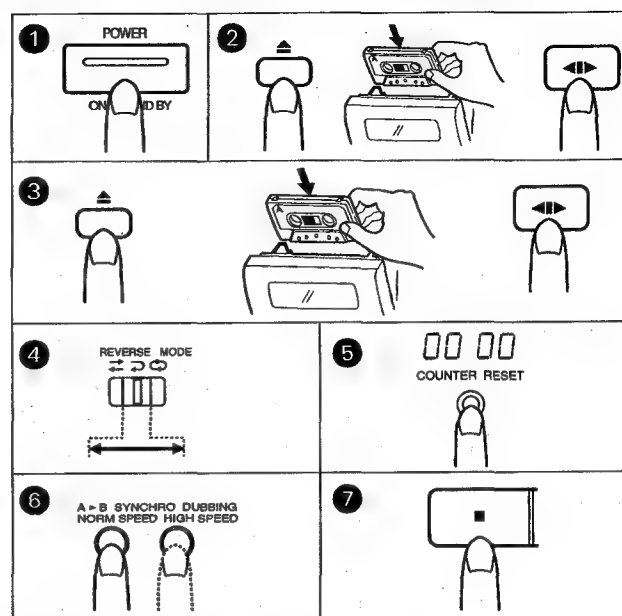
Notes:

- Synchronized recording or DDRP recording stops automatically when the CD player stops playing.
- To cancel synchronized recording or DDRP recording, press the STOP button of the CD player or cassette deck.
- Synchronized recording does not start except when the record-pause mode is set by simultaneously pressing the ● REC/REC MUTE and ■ PAUSE buttons in the stop mode.
- The source is locked to the CD position during synchronized recording or DDRP recording to avoid accidental stops or switch-over to another component. To switch over the components, cancel synchronized recording or DDRP recording first.
- The INPUT LEVEL control does not function during DDRP recording.

DUBBING

• Synchro dubbing

Operate in the order of the numbers in the illustration.



- 1 Press the POWER switch to set to ON.
- 2 Load a prerecorded tape with side A facing out into the deck A and press the ◀▶ (direction) button to select the travel direction.
- 3 Load a blank tape with side A facing out into deck B, and press the ◀▶ (direction) button to select the side to be recorded.
- 4 Select the REVERSE MODE.
- 5 Press to "0000". (Deck B)
- 6 Press the SYNCHRO DUBBING (NORM or HIGH SPEED) button to start dubbing.
- 7 Press the ■ (stop) button of deck B to stop dubbing.

When deck B stops, the dubbing mode is automatically released.

• Synchro record muting

When deck A stops or enters any mode other than the playback mode during dubbing, deck B enters the record mute operation automatically and then enters the record-pause mode.

• Before pressing the SYNCHRO DUBBING button

Confirm that deck B is in the stop mode before starting dubbing.

Dubbing and DOLBY NR switch

During dubbing, the same NR mode selected for the playback cassette is applied to the recording cassette, regardless of the position of the NR switch.

Input level

Recording is performed at the same level as the playback tape during dubbing regardless of the position of the INPUT LEVEL control.

Tape editing

1. Press the ● REC /REC MUTE button when finished dubbing a tune. Deck B automatically enters the record muting mode and leaves a non-recorded section of about 4-seconds then enters the record-pause mode.
2. Press the ■ (stop) button of deck A and search for the next tune you want by using the ►►, ◀◀ or PLAY button. Then stop the cassette just before the beginning of the tune.
3. Press the same SYNCHRO DUBBING button pressed before the pause again, and dubbing will start.

Notes at dubbing

1. Normal-speed dubbing is recommended to obtain good sound quality.
2. Television receivers placed close to the deck may cause interference on the recorded signal when the deck is used in the high-speed dubbing mode. If this happens, either turn off the television receiver or use the normal-speed dubbing mode.

MAINTENANCE

The importance of cleaning

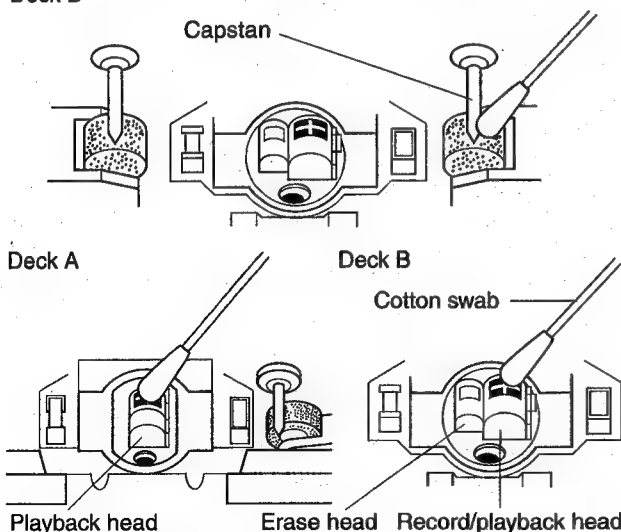
When the tape is moving, magnetic powder and dust naturally accumulate on the heads, capstan and pinch roller. When they become too dirty,

- tone quality deteriorates.
- the output sound level drops.
- the previous sound is not erased satisfactorily.
- recordings are not satisfactory.

Because of this, clean the heads, etc. every 10 hours of use so that optimum recordings will be made.

Cleaning the heads, pinch roller and capstan

Deck B



Wipe the heads, the capstan, etc. with a cotton swab with its tip dipped in alcohol.

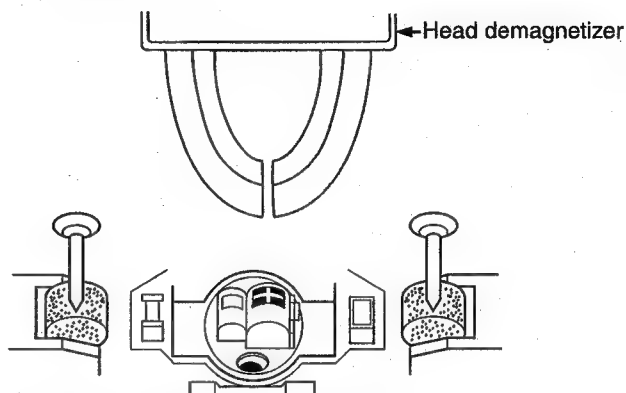
For effective cleaning, use a cleaning kit available from your audio store. After cleaning, be sure that the cleaning fluid has completely dried before loading a cassette.

Demagnetizing the heads

Magnetic objects brought close to the head or using the deck for a long period of time, results in magnetization of the head, thus noise occurs. When the noise is excessive, high frequencies on the recorded tape may be erased.

Demagnetize the heads and other metal parts that come into contact with the tape every 20-30 hours of use with a head demagnetizer (available from your audio store).

Example: Deck B



TROUBLESHOOTING

What appears to be trouble is not always real trouble. Make sure first....

1. **Cassette cannot be loaded.**
 - Is the cassette positioned correctly?
2. **When PLAY button is pressed, tape does not move.**
 - Is the tape too loosely wound?
3. **Tape runs, but no sound is heard.**
 - Are all connections properly and securely made?
 - Is the MONITOR switch of the stereo amplifier set to the TAPE position?
 - Is the VOLUME control of the stereo amplifier set to MIN?
4. **Sound quality is poor.**
 - Is the DOLBY NR switch set to the right position?
 - Is the head section dirty?
 - Is the record/playback head magnetized?
 - Is the tape worn out?
5. **Recording cannot be performed.**
 - Are the safety tabs of cassette tape broken?
 - Are all connections properly and securely made?
 - Is the head section dirty?
6. **Previously recording is not completely erased.**
 - Is the erase head dirty?
7. **Since tape speed is irregular, wow and flutter occurs.**
 - Is the pinch roller or capstan dirty?
 - Is the tape rewound too tight?

SPECIFICATIONS

Type	: Double cassette deck
Track system	: 4-track, 2-channel
Tape speed	: 4.8 cm/sec (1-7/8 inch/sec) (Normal) 9.5 cm/sec (3-3/4 inch/sec) (High)
Frequency response	: (-20 dB recording) Type IV tape ; 20 - 17,000 Hz 30 - 16,000 Hz (± 3 dB) Type II tape; 20 - 16,000 Hz 30 - 15,000 Hz (± 3 dB) Type I tape ; 20 - 16,000 Hz 30 - 15,000 Hz (± 3 dB)
S/N ratio	: 58 dB (S = 315 Hz, $k_3 = 3\%$, N = A-weighted, Type IV tape) The S/N is improved by about 15 dB at 500 Hz and by max. 20 dB at 1 kHz ~ 10 kHz with Dolby C NR on and improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with DOLBY B NR on.
Improvement of MOL	: 4 dB at 10 kHz with Dolby C NR on.
Wow and flutter	: 0.08% (WRMS), $\pm 0.2\%$ (DIN/IEC)
Channel separation	: 40 dB (1 kHz)
Crosstalk	: 60 dB (1 kHz)
Harmonic distortion	: k_3 ; 0.8% (Type IV tape, 315Hz, 0 VU)
Heads	: Deck A; METAPERM head for playback $\times 1$ Deck B; METAPERM head for recording/playback, 2-gap ferrite head for erasure; Combination head $\times 1$

Motors	: Electric governed DC motor for capstan $\times 1$ DC motor for reel $\times 1$ DC motor for mechanism drive $\times 1$ (For both decks A and B)
Fast forward/ Rewind time	: Approx. 110 sec. with C-60 cassette
Input terminals	: LINE IN : Input sensitivity; 80 mV (0 VU) ($\times 1$ circuit) Input impedance; 50 k Ω
Output terminals	: LINE OUT : Output level; 300 mV (0 VU) ($\times 1$ circuit) Output impedance; 5 k Ω PHONES $\times 1$: Output level; 0.3 mW/8 Ω (0 VU) Matching impedance 8 Ω - 1 k Ω
Other terminals	: COMPU LINK-3/SYNCHRO $\times 2$
Power requirement	: AC 240 V, 50 Hz (Australia) AC 230 V, 50 Hz (U.K.) AC 120 V, 60 Hz (U.S.A.)
Power consumption	: With power switch on 17 W With power switch standby 4.0 W
Dimensions (W \times H \times D)	: 435 \times 134 \times 331 mm (17-3/16 \times 5-5/16 \times 13-1/16")
Weight	: 4.8 kg (10.6 lbs.)
Accessories	: Pin plug cord2 Remote cable1

Design and specifications are subject to change without notice.

JVC
VICTOR COMPANY OF JAPAN, LIMITED

1 Location of Main Parts

■ Top view

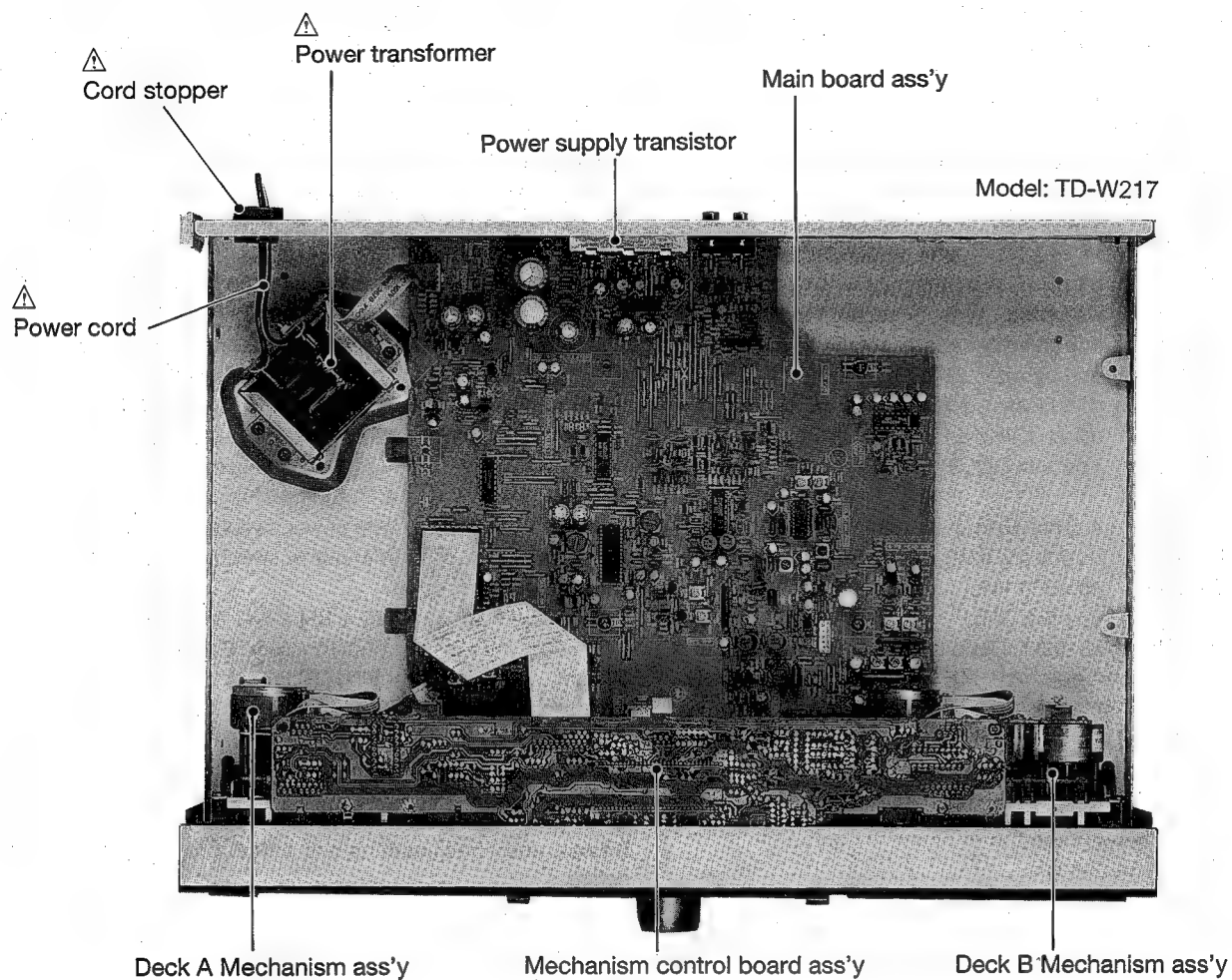


Fig. 1 - 1

■ Mechanism

◆ Top view

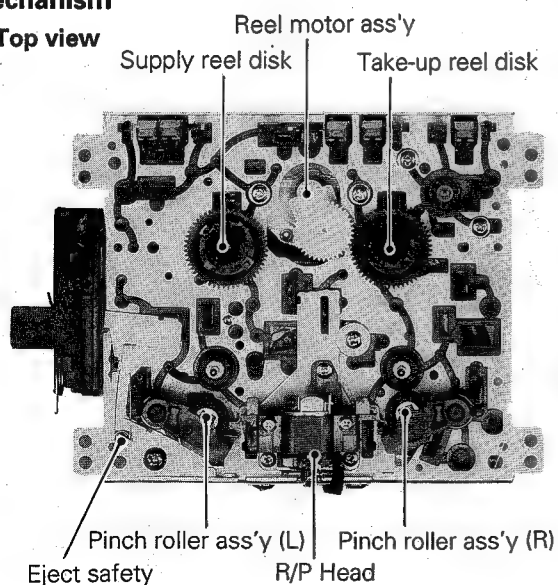


Fig. 1 - 2

◆ Bottom view

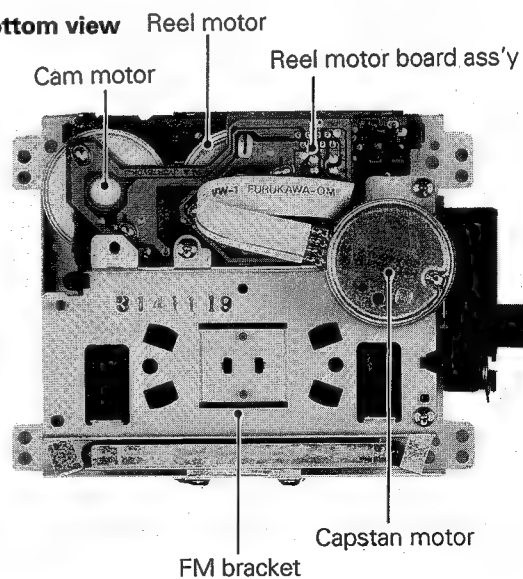


Fig. 1 - 3

2 Removal of main parts

■ Enclosure Section

◆ Top cover (Fig. 2 - 1)

1. Remove four screws ① retaining the top cover from both side.
2. Remove two screws ② retaining the top cover from the back side.
3. To remove the top cover, slide in direction of arrow and lift away (refer to Fig. 2 - 1).

◆ Front panel assembly (Fig. 2 - 2)

1. Remove the top cover as described in above.
2. Remove three screws ③ retaining the front panel ass'y from bottom side.
3. Release the front panel ass'y from two pawls in the front and bottom sides and draw it to the front side.
4. Disconnect all connectors between the mechanism ass'y, front panel ass'y and the main board ass'y.

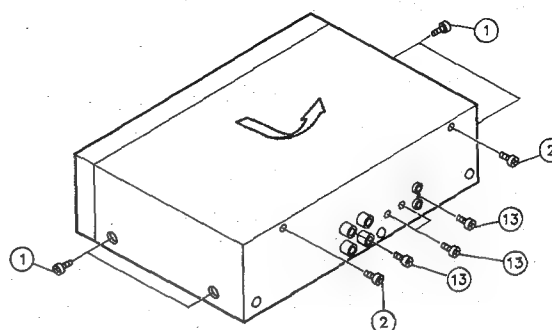
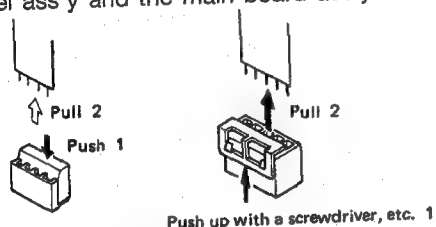


Fig. 2 - 1

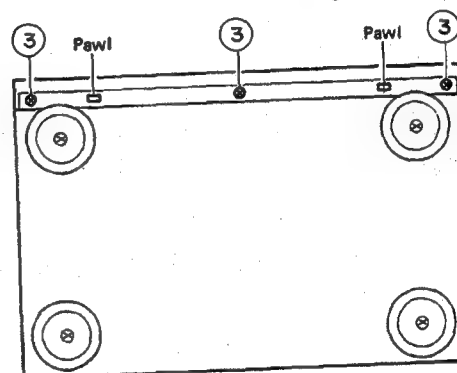


Fig. 2 - 2

◆ Mechanism assembly

★ Although the mechanism assembly can be removed without detaching the front panel ass'y, it is recommended to detach the front panel ass'y to do the work with ease.

1. Remove two screws ④ or two screws ⑤ from the corners of the mechanism. (Fig. 2 - 5)
2. Open the door and remove the mechanism ass'y.
(At this time, door lock arm spring and door lock arm are removed together with.)
3. For moving the mechanism ass'y only, disconnect the following wirings.

a) Mechanism ass'y side (Fig. 2 - 4)

Top side connector of the cam switch board (CN2).

Connector of the motor board (CN1). (Board to Board connector)

b) Main board ass'y side (Fig. 2 - 3)

Disconnects CN802 from Mecha control board, CN801 from Switch & Volume board ass'y and CN861 from H. Phone jack board ass'y.

Disconnect wire coming from the head mount ass'y CN811 at deck A and CN815 at deck B.

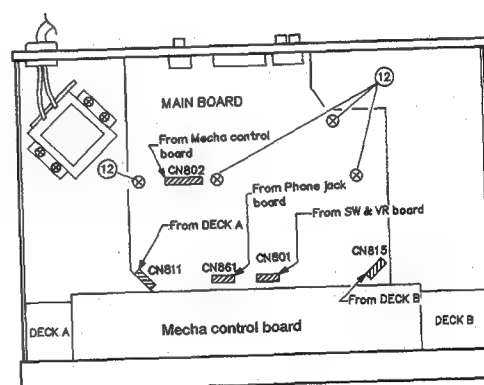


Fig. 2 - 3

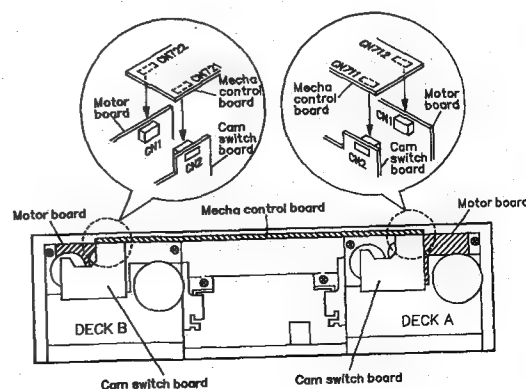


Fig. 2 - 4

◆ Eject arm ass'y (Fig. 2 - 5)

1. Remove two screws ⑦ retaining the eject arm ass'y and pull it out.

◆ Mechanism holder and door ass'y (Fig. 2 - 8)

1. Remove four screws ⑧ retaining the mechanism holder.
2. Remove the damper ass'y (for easy reassembling work).
Insert an ordinary (—) screwdriver or the like in to the gap between the damper and the front panel to disengage the pawl, and draw the damper ass'y outwards. (see Fig 2 - 6)
3. Remove the arm shaft of the cassette holder (door ass'y) from the mechanism holder. (The door spring is engaged with the door side by the longer side.) (see Fig. 2 - 7)
4. Remove the eject spring from lock lever and mechanism ass'y. (see Fig. 2 - 7)

◆ Switch & Volume board ass'y (Fig. 2 - 8)

1. After removing the mechanism holder, proceed to the following steps.
2. Pull out the INPUT volume knob.
3. Remove four screws ⑨ retaining the Switch & Volume P.C. board.
4. Lift the board right upwards to remove it since it is connected to the mechanism control key board with connector pins (CN603/CN604).
5. Disconnect CN602 coming from Mecha control board ass'y (CN702).

◆ Headphone jack board ass'y (Fig. 2 - 8)

1. After removing the Switch & Volume board ass'y, pull the H. Phone jack board ass'y outwards while pushing it down toward the bottom side to remove it.

◆ Key switch board ass'y (Fig. 2 - 8)

1. Remove one screw ⑩ (Deck A or B) retaining the board ass'y.
2. Do the same for the other side.

◆ Main board ass'y (see Fig2 - 3, Fig 2 - 1)

1. Remove four screws ⑫ retaining the board.
2. Remove four screws ⑬ retaining the board to the rear panel.

◆ Mechanism control board ass'y (Fig. 2 - 8)

1. Remove two screws ⑪ retaining the board.

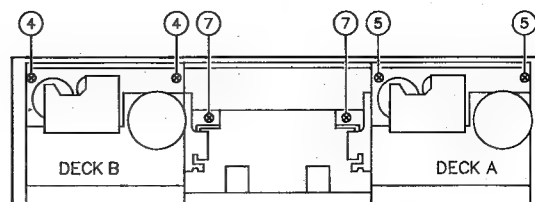


Fig. 2 - 5

How to remove damper

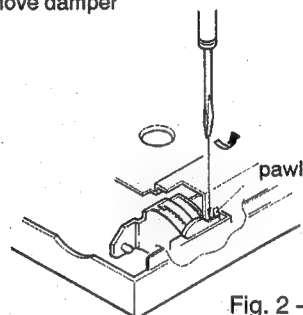


Fig. 2 - 6

How to engage the door and eject spring

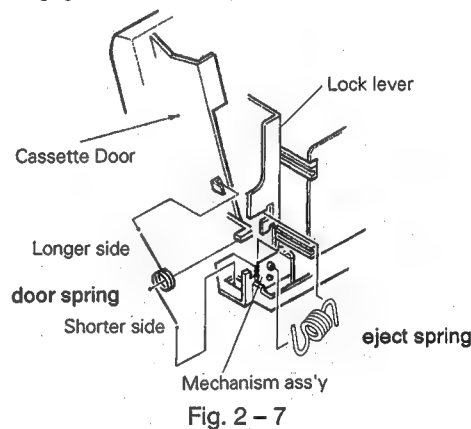


Fig. 2 - 7

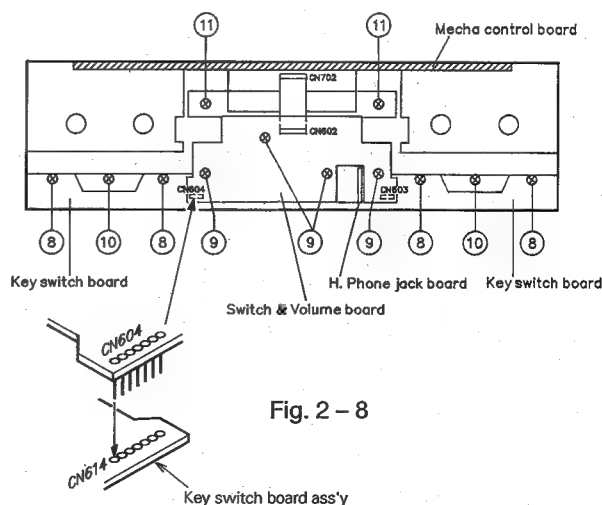


Fig. 2 - 8

● Reassembling procedure of the front panel ass'y

1. Attach the Key switch board ass'y to the panel with two screws.
2. Put the door ass'y and the mechanism holder together with on the front panel.
3. Attach the mechanism holder to the front panel ass'y with two screws.
4. Engage the door spring properly.
5. Install the damper. (Push the pawl side last to engage it.)
6. Attach the Mecha control board ass'y to the panel with two screws.
7. Install the eject arm ass'y.
8. Attach the Switch & Volume board ass'y to the panel with five screws.
9. Install the mechanism ass'y.
10. Hook the eject spring between lock lever and mechanism ass'y.

■ Cassette mechanism section

◆ Head mount assembly (Fig2-9, Fig2-10)

1. Remove three screws ① retaining the head mount ass'y.

◆ Pinch roller assembly (Fig. 2 - 9, Fig. 2 - 11)

1. Remove the pinch roller and pinch roller spring by disengaging the pawl hooking it.
2. For reengaging the pinch roller and pinch roller spring, refer to Fig. 2 - 11.

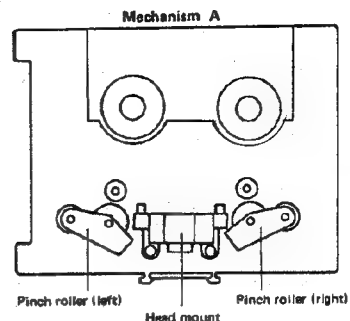


Fig. 2 - 9

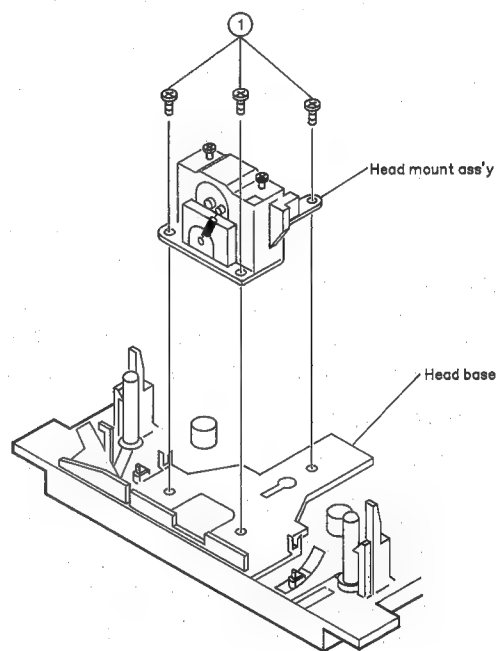


Fig. 2 - 10

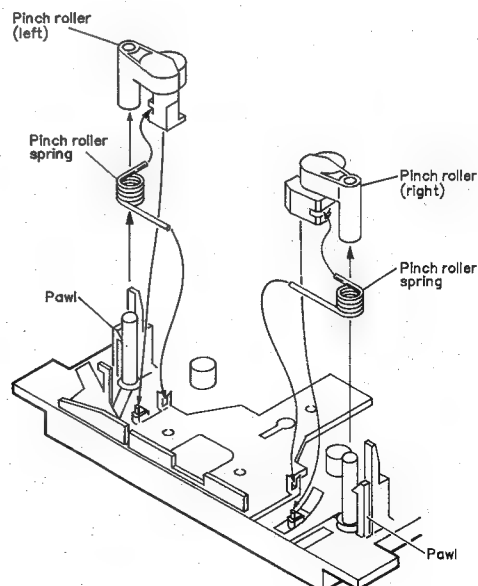


Fig. 2 - 11

◆FM bracket/Capstan motor assembly (Mechanism A and B)

1. Remove soldering of connector FM on Reel motor board. (Fig. 2 - 12)
2. Remove three screws ② and disengage two pawls, and then the FM bracket and the capstan belt can be removed. (Fig. 2 - 12, 2 - 13)
3. Remove two screws ③ retaining the capstan motor from the FM bracket. (Fig. 2 - 12)
4. For reengaging the capstan belt, refer to Fig. 2 - 13.

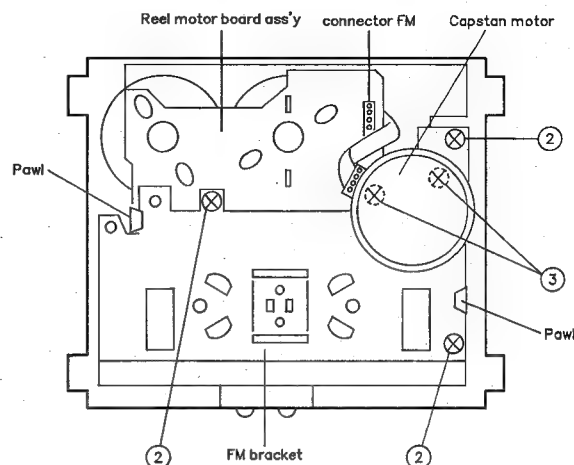


Fig. 2 - 12

◆Flywheel ass'y (Fig. 2 - 14)

1. Remove two screws ④ and remove the shield plate.
2. Pull up the Flywheel (L) and (R) and remove them.

◆Reel motor board (Fig. 2 - 14)

1. Remove four soldering of the Reel motor and Actuator motor and remove the Reel motor board.

◆Reel motor board (Fig. 2 - 15)

1. Remove two screws ⑤ from rear of chassis and remove the Reel motor ass'y toward upward.

◆Actuator motor ass'y (Fig. 2 - 15)

1. Remove two screws ⑥ from rear of chassis and remove the Actuator motor ass'y toward upward.

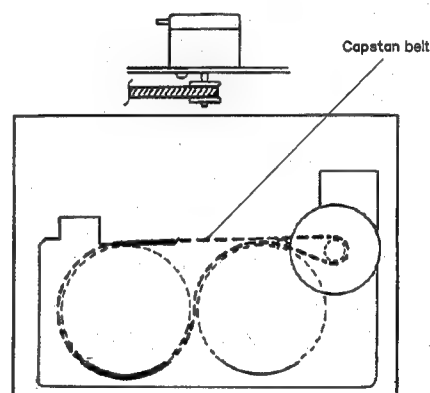


Fig. 2 - 13

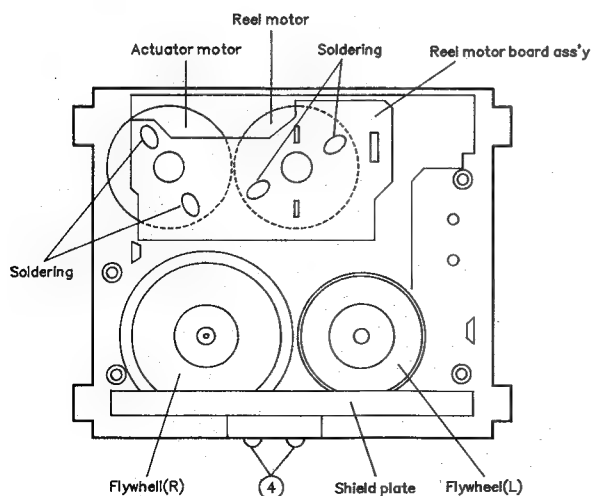


Fig. 2 - 14

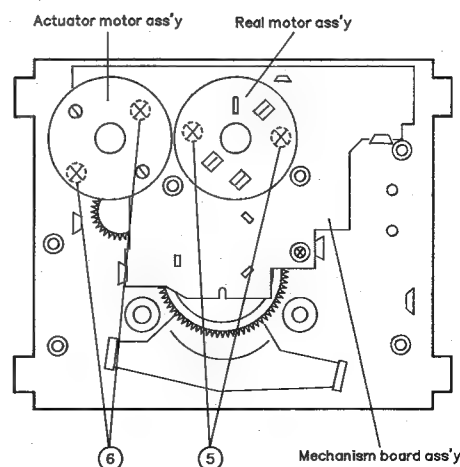


Fig. 2 - 15

◆ Mechanism board ass'y (Fig. 2 - 16)

1. Remove one screw ⑦ retaining the board.
2. Release the Mechanism board from five pawls.
3. For gearing between the Mechanism board and Control cam, see the magnified illustration in a circle.

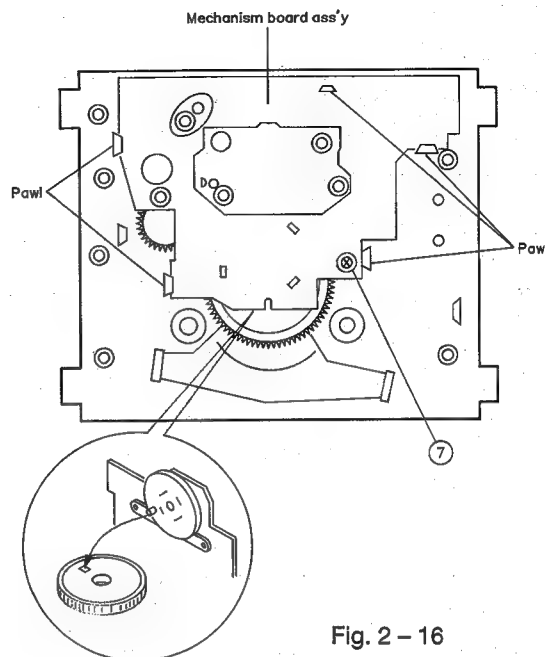


Fig. 2 - 16

◆ Control cam (Fig. 2 - 17, 2 - 18)

1. Release the control cam from two pawls. (Fig. 2 - 17)
2. For assembling the control cam, fits ① zone (groove) of control cam to ① position of Pinch lever and ② zone (groove) to ② position of Head base shaft. (Fig. 2 - 17, 2 - 18)

◆ Actuator gear A and B (small) (Fig. 2 - 17)

1. Release the actuator gear A (small) from one pawl and remove it toward upward.
2. Release the actuator gear B (small) from one pawl and remove it toward upward.

◆ Actuator gear (large) (Fig. 2 - 17)

1. After removing the Control cam, actuator gear A (small) and actuator gear B (small), remove the Actuator gear (large).

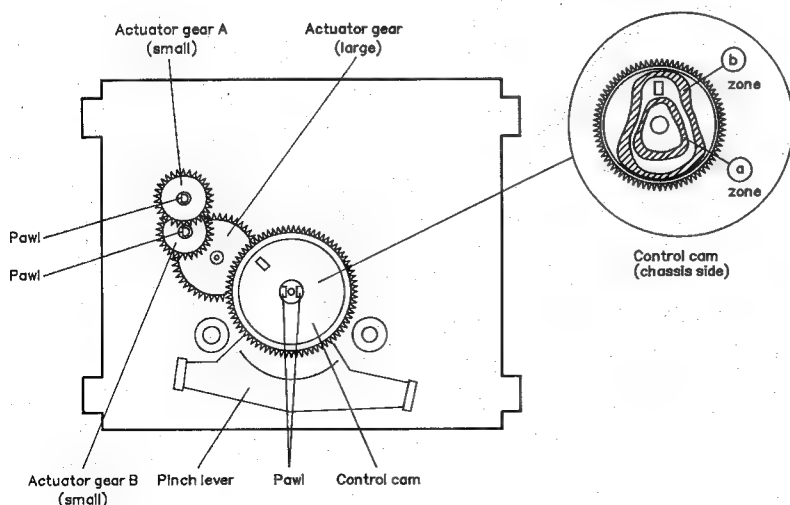


Fig. 2 - 17

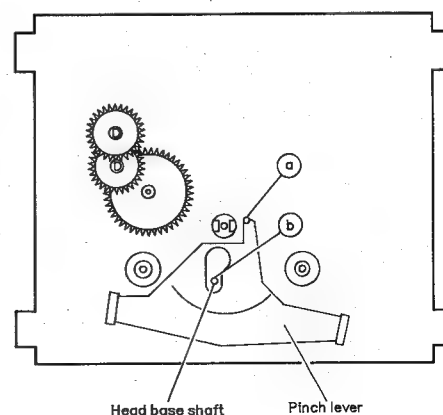


Fig. 2 - 18

3 Main Adjustment

◆ Measuring instruments required for adjustment

- (1) Low – frequency oscillator (oscillation frequency 50Hz – 20kHz, 0dB output with 600 Ω impedance)
- (2) Attenuator (600 Ω impedance)
- (3) Electronic voltmeter
- (4) Standard tapes
VTT712 (tape speed, wow and flutter measurement)
VTT727 (400Hz reference level)
TMT735 (1 k, 12.5 k), VTT739 (63, 1 k, 10 k) (playback frequency)
VTT703 or VTT703L (10 kHz), VTT704 (12.5 kHz) (azimuth)
- (5) Recording reference tapes
AC-224 (TDK AD) (Normal), AC-513 (TDK SA) (CrO₂)
AC-712 (TDK MA) Metal
- (6) 600 Ω resistors (for attenuator matching)
- (7) Distortion meter (bandpass filter)
- (8) Torque gauge (cassette) for CTG-N, TW2111, TW2121, TS2231 and TW2241, mechanism adjustments

(9) Wow & flutter gauge

(10) Frequency counter gauge

(11) M300 gauge

(12) Band pass filter

◆ Power supply voltage

Set the line voltage selector switch to 240V/ 230V/ 220V/ 127V/ 120V/ 110V according to \rightleftharpoons your local voltage.

AC240V, 50/60Hz : A/B version

AC230V, 50/60Hz : E/EN/G version

AC120V, 60Hz : C/J version

AC230/127/110V, 50/60Hz: U/UT version

(13) Standard position of the switch and volume knob

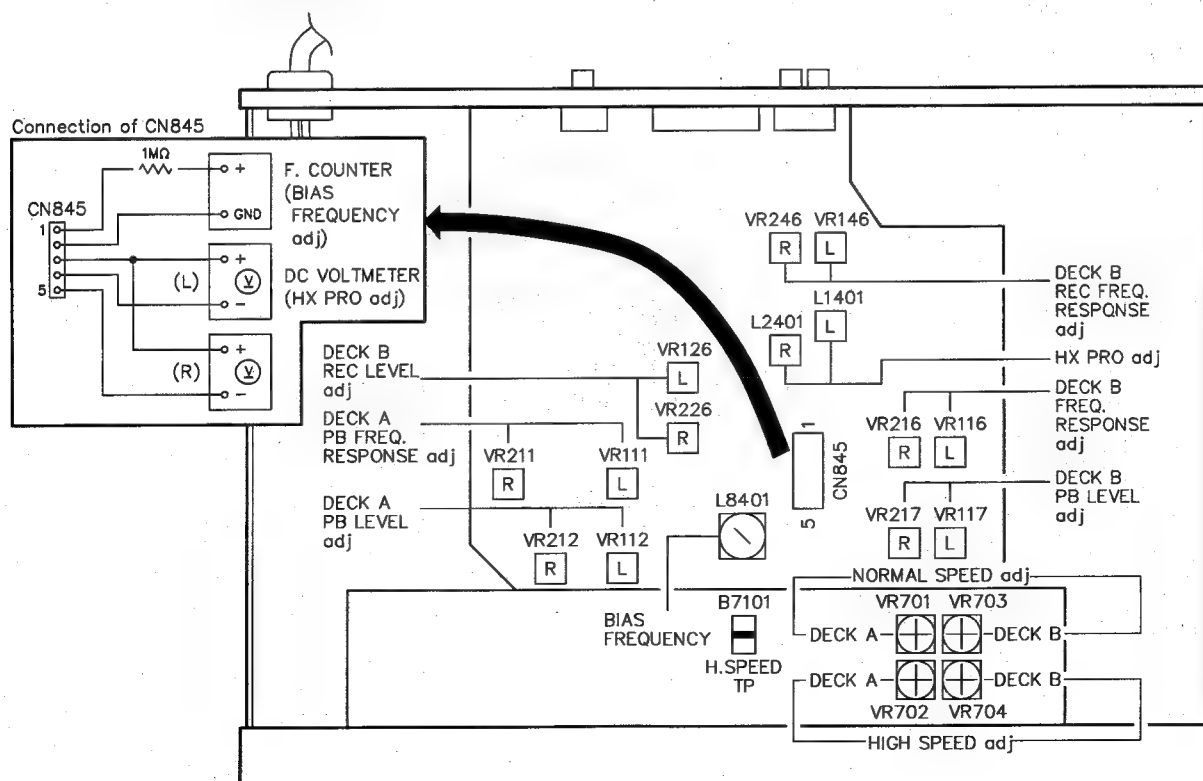
Switches and volume knobs Setting position

INPUT LEVEL : MAXIMUM

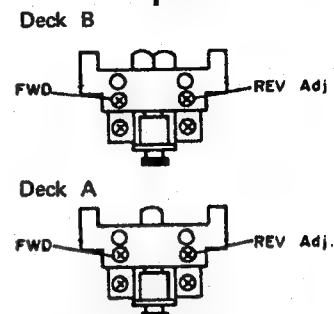
DOLBY NR : OFF

REVERSE MODE : \rightleftharpoons

◆ Location of Adjustment



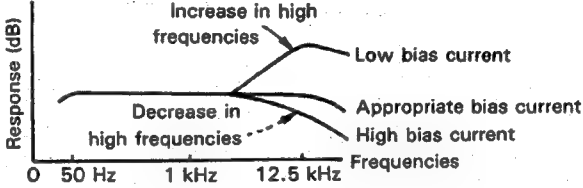


◆ Mechanism Adjustment

Item	Conditions	Adjustment and Confirmation	Standad value	Adjust point
Adjusting Head azimuth	Test tape :VTT704 (12.5kHz)	<ol style="list-style-type: none"> 1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Play back the VTT704 (12.5kHz) test tape. 3. Adjust the head angle with the screw (FWD and REV) until the reading of the electronic voltmeter becomes maximum for both channels (phase difference must be "0".) 4. Repeat the adjustment in FWD and REV modes as well as for the decks A and B. 	Maximum	Screws (FWD, REV) 
Adjusting motor speed	<ol style="list-style-type: none"> 1. For high speed adjustment, set the deck for play mode and shortcircuit between B7101 and GND. 2. Do not do anything while B7101 and GND are shortcircuited. 	<ol style="list-style-type: none"> 1. Connect a frequency counter to the LINEOUT terminals. 2. Perform normal speed adjustment first, and then do high speed adjustment. 3. Play back the VTT712 test tape. 4. Adjust for deck A : Adjust VR701 for normal speed at 300Hz, and VR702 for high speed at 600Hz. Adjust for deck B : Adjust VR703 for normal speed at 3000Hz, and VR704 for high speed at 6000Hz. 5. Difference in FWD and REV frequencies must be less than 48Hz. 	Normal speed: Deck A, B; $3000 \pm 15\text{Hz}$ High speed : Deck A, B; $6000 \pm 30\text{Hz}$	Deck A : Normal; VR701 High ; VR702 Deck B; Normal; VR703 High; VR704
Checking wow and flutter		Connect a wow and flutter meter to LINE OUT terminals. Play back the VTT712 test tape. Check to see if the reading of the meter is within 0.17% (WRMS).	0.17% (WRMS)	
Checking play back torque		Employ a torque testing cassette tape (TW2111[FWD] / TW2121[REV] for the checking, or remove the cassette cover and use a torque gauge.	27 – 70 gr-cm	
Checking fast for – ward/rewind torque		Measure the torque in the fast forward mode in the same manner as in the above. Test cassette : TW2231 (FWD), TW2241 (REV)	90 – 200gr – cm	

◆ Electrical Adjustment Procedure

Item	Check and Adjustment			
1 Cheking DOLBY circuit (Rec.mode) (BIAS-CUT)	Signal input: LINE IN Cal.level: 400Hz, - 8dBs	DOLBY B (Rec)	Input signal (Frequency, level)	Output raise value, deviation value
			1kHz, cal. - 40dB	+5.7 dB ± 2 dB
			5kHz, Cal. - 20dB	+3.5dB ± 1.5 dB
	Output terminal TP : NR IC831 (53) & (8) pin.	DOLBY C (Rec)	1kHz, Cal.	0 dB ± ^{0.5} _{1.0} dB
			1kHz, Cal. - 40	+16.2 dB ± ³ ₂ dB
			5kHz, Cal. - 20	+2.9 dB ± 2.5 dB
			1kHz, Cal.	0 dB ± 1 dB

Item	Conditions	Adjustment and Confirmation	Standard	Adjusting
*2 Play back level adjustment	Test tape VTT727 : 400Hz	Play back VTT727, then confirm that the level at LINE OUT is -4.5 dBs ± 0.5 dB. Adjust VR112/VR212 and VR117/VR217 so that LINE OUT level becomes -4.5 dBs.	LINE OUT -4.5 Bs ± 0.5 dB Phone Out -21 dB ^{+2.5 dB} _{-1.5 dB}	Deck B L : VR117 R : VR217 Deck A L : VR112 R : VR212
*3 Playback frequency response adjustment	Test tape TMT735:1kHz/12.5kHz VTT739: 1kHz/63Hz	Play back TMT735 test tape, and adjust VR116, VR216 (deck B) and VR111, VR211 (deck A) so that deviation of 12.5 kHz to that of 1 kHz is 0.5 ± 0.5 dB (deck A) and 0 ± 0.5 dB (deck B). Then, play back VTT739 test tape to confirm that deviation of 63 Hz to 1kHz is +2 ± 3 dB.	with 12.5kHz as reference, 0.5 ± 0.5 dB (deck A) and 0 ± 0.5 dB (deck B) at 1 kHz 63 Hz (check): +2 ± 3 dB	Deck B L: VR116 R: VR216 Deck A L: VR111 R: VR211
*4 Bias frequency adjustment	Frequency counter TP: CN845 pin 1	Connect frequency counter to the CN845 and adjust L8401 so that the counter reads 95 kHz.	95 kHz ± 1 kHz	Deck B L8401
*5 Slave oscillation (HX PRO) adjustment	DC.Voltmeter TP: CN845	This step must be performed after the bias frequency adjustment. Load a metal tape and set the deck to the recording mode. Adjust L1401 and L2401 to minimize respective voltages of CN845 (PIN 3 - 4) at Lch and (PIN 3 - 5) at Rch.	Minimum	Deck B L-ch : L1401 R-ch : L2401
6 Input sensitivity level check		1. Supply at 1 kHz signal to the LINE IN terminals at -19 dBs, confirm that LINE OUT level is -8 dBs. 2. Confirm that difference level between left and right within 2dB.	LINE IN : -19 dBs ± 2 dB	

Item	Conditions	Adjustment and Confirmation	Standard	Adjusting
*7 REC/PB frequency response adjustment	LINE INPUT level: Ref. -20 dB (-39 dBs \pm 2 dB) NR SWITCH : OFF	<p>This step must be performed after the slave oscillation adjustment.</p> <p>Record the 1.25 kHz and 12.5 kHz signals at the level of -20 dB (20 dB lower than the reference level).</p> <p>Playing back the recorded signals, adjust VR146 and VR246 so that the level of the 12.5 kHz signal is 0 ± 0.5 dB to the level of the 1.25 kHz.</p> 	12.5 kHz level: 0 ± 0.5 dB higher than the 1 kHz level.	Deck  L : VR146 R : VR246
*8 Recording level adjustment	NR switch : Off TAPE switch: Normal Input level: LINE -20 dB	<p>1) Apply 400 Hz signal to the LINE IN terminals, record 400 Hz signal at -20 dBs input for both (L and R) channels on a normal tape.</p> <p>2) Play back the recorded part, and adjust the recording level controls so that LINE OUT terminal level becomes -8 dBs. Then adjust VR126 and VR226 so that LINE OUT terminal level becomes -8 dBs.</p>	Normal: -8 ± 0.5 dBs CrO ₂ /Metal: -8 ± 1 dBs (Difference between L and R within 0.5 dB)	Deck  L : VR126 R : VR226
9 Maximum out put check		Supply 1 kHz signal to the LINE IN terminal in the Rec. monitoring mode, and read non-clipped signal level at the LINE IN terminal	LINE OUT: more than 8 dBs PHONES OUT: more than -16 dBs	
10 Checking record/ playback distortion		<p>1) Record a 1 kHz, -20 dBs signal to LINE IN terminals.</p> <p>2) Play back the recorded part, Check the output with a distortion meter to see if the value conforms to the standard value.</p>	Normal: Less than 2% CrO ₂ /Metal: Less than 3%	
11 Checking signal to noise ratio recording playback		<p>1) Record a 1 kHz, -20 dBs signal, Stop the input bu disconnecting from the terminal to perform non-signal recording.</p> <p>2) Play back the recorded part. Measure the -8 dBs recording output and the non-signal recording output for comparison using an electronic voltmeter. Check to see if the value conforms to the standard value.</p>	Normal, More than 40 dB CrO ₂ /Metal More than 41 dB	

Item	Conditions	Adjustment and Confirmation	Standard	Adjusting
12 Checking erasing coefficient		<p>1) Apply a 400 Hz, +20 dBs signal to the LINE IN terminals.</p> <p>2) Perform recording with the signal enhanced by 20 dB.</p> <p>3) Erase a part of the recording.</p> <p>4) Measure the output difference between the erased part and non-erased part to compare with an electronic voltmeter.</p> <p>For the measurement using a metal tape, connect a band pass filter between the deck and the electronic voltmeter.</p> <pre> graph LR Input["Input (400 Hz)"] --> TapeDeck["Tape deck (recording, erasing)"] TapeDeck -- "(400 Hz)" --> BPF["Band pass filter"] BPF --> Voltmeter["Electronic voltmeter"] </pre>	More than 55 dB	

4 Wiring Connections

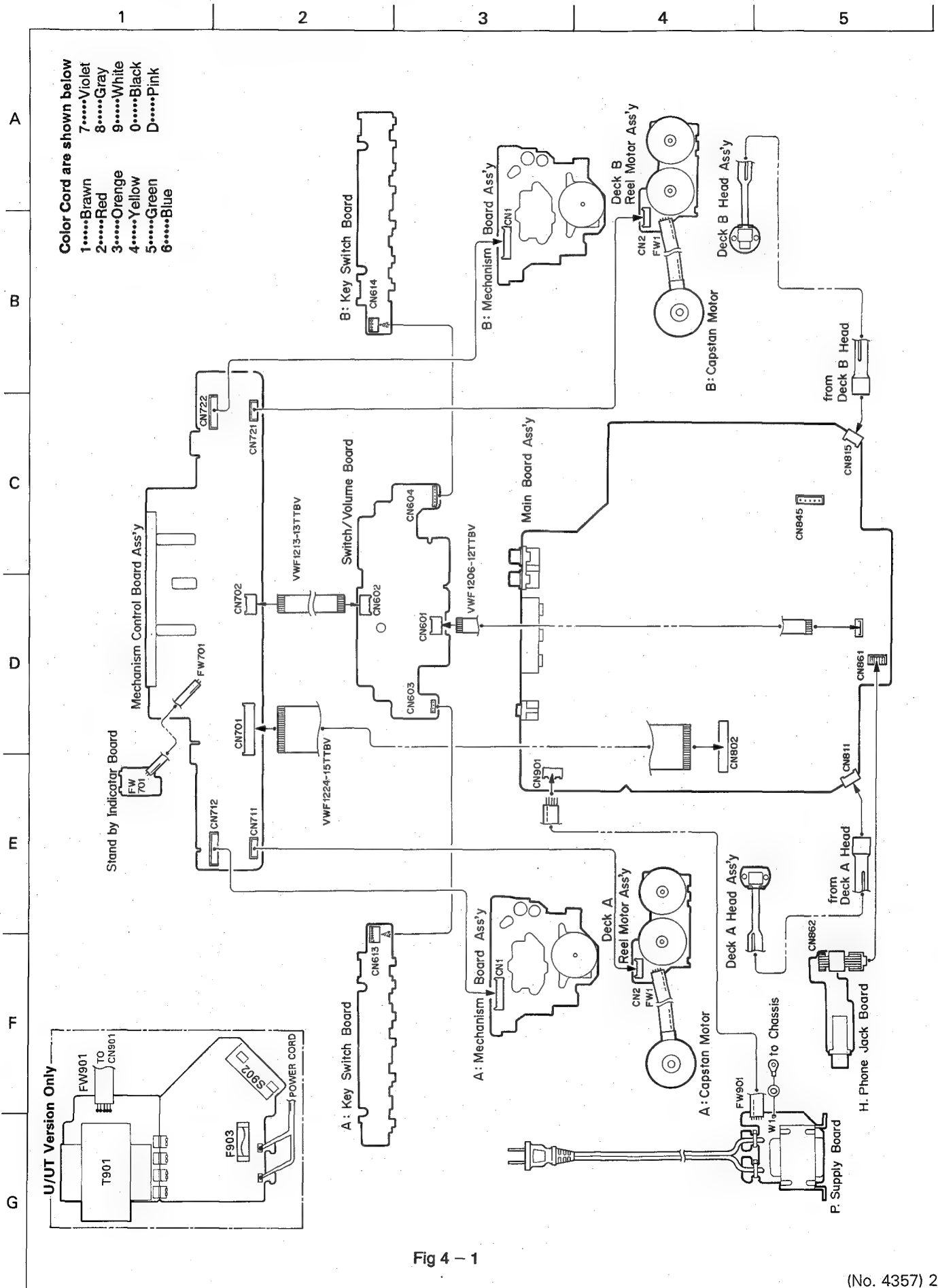
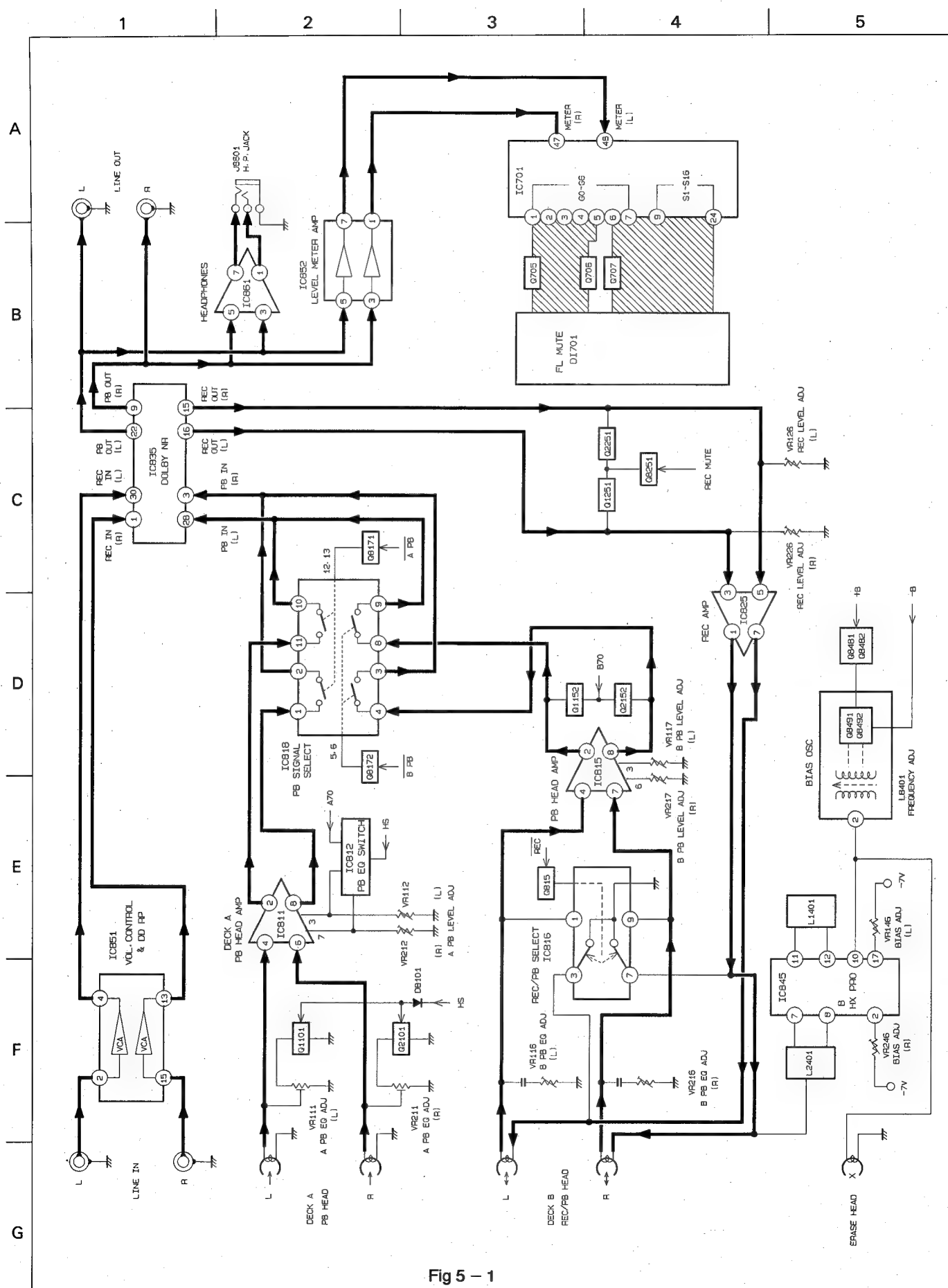
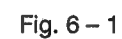


Fig 4 - 1





1 2 3 4 5 6 7 8 9 10

A

B

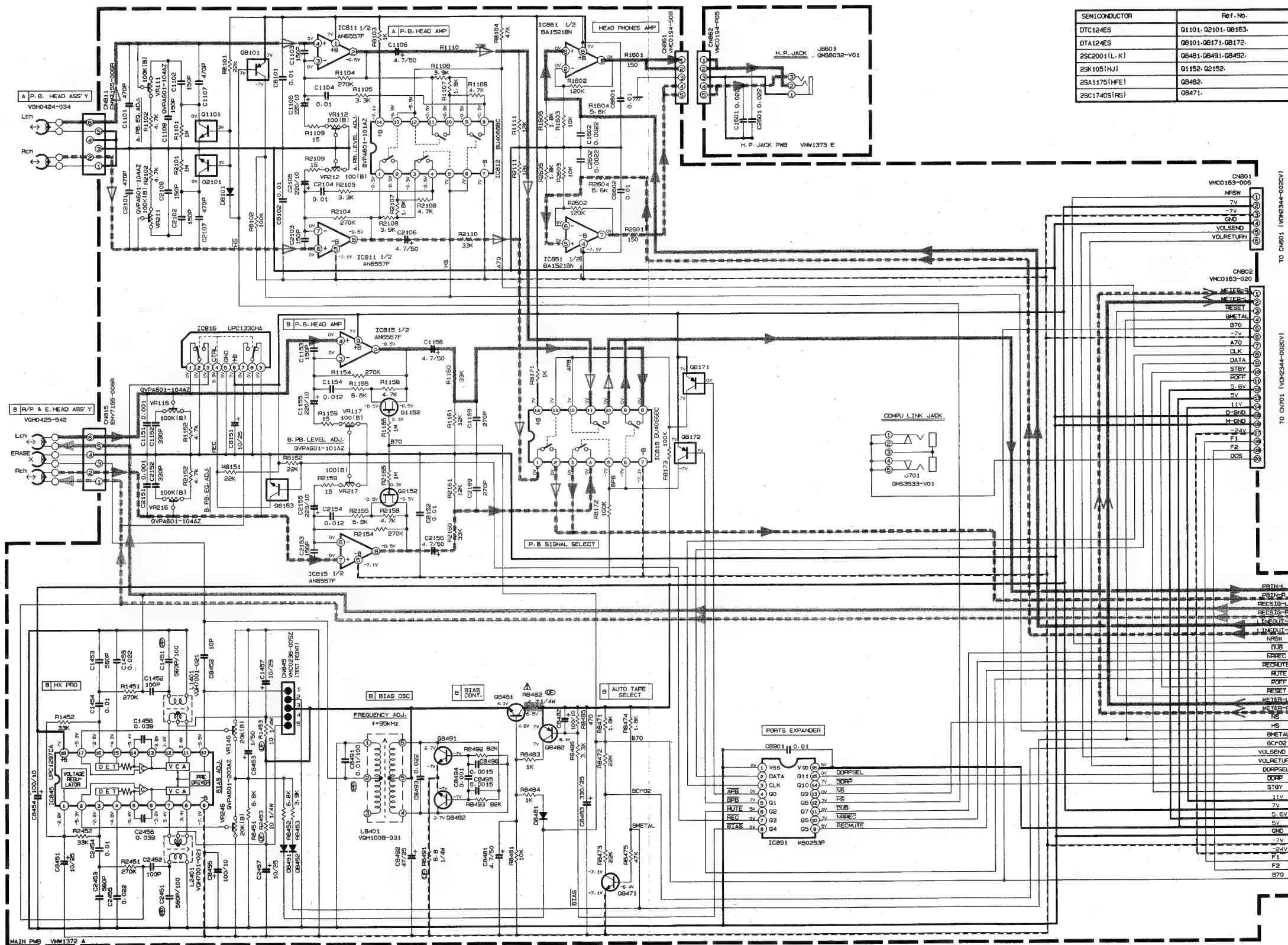
C

D

E

F

G



SEMICONDUCTOR	Ref. No.
DTC124ES	01101, 02101, 08163
DTA124ES	08101, 08171, 08172
2SC2001 (L, K)	08481, 08491, 08492
2SK105 (H, J)	01152, 02152
2SA1175 (HFE)	08482
2SC1740S (RS)	08471

To 3-F
on page 29

To 4-F
on page 29

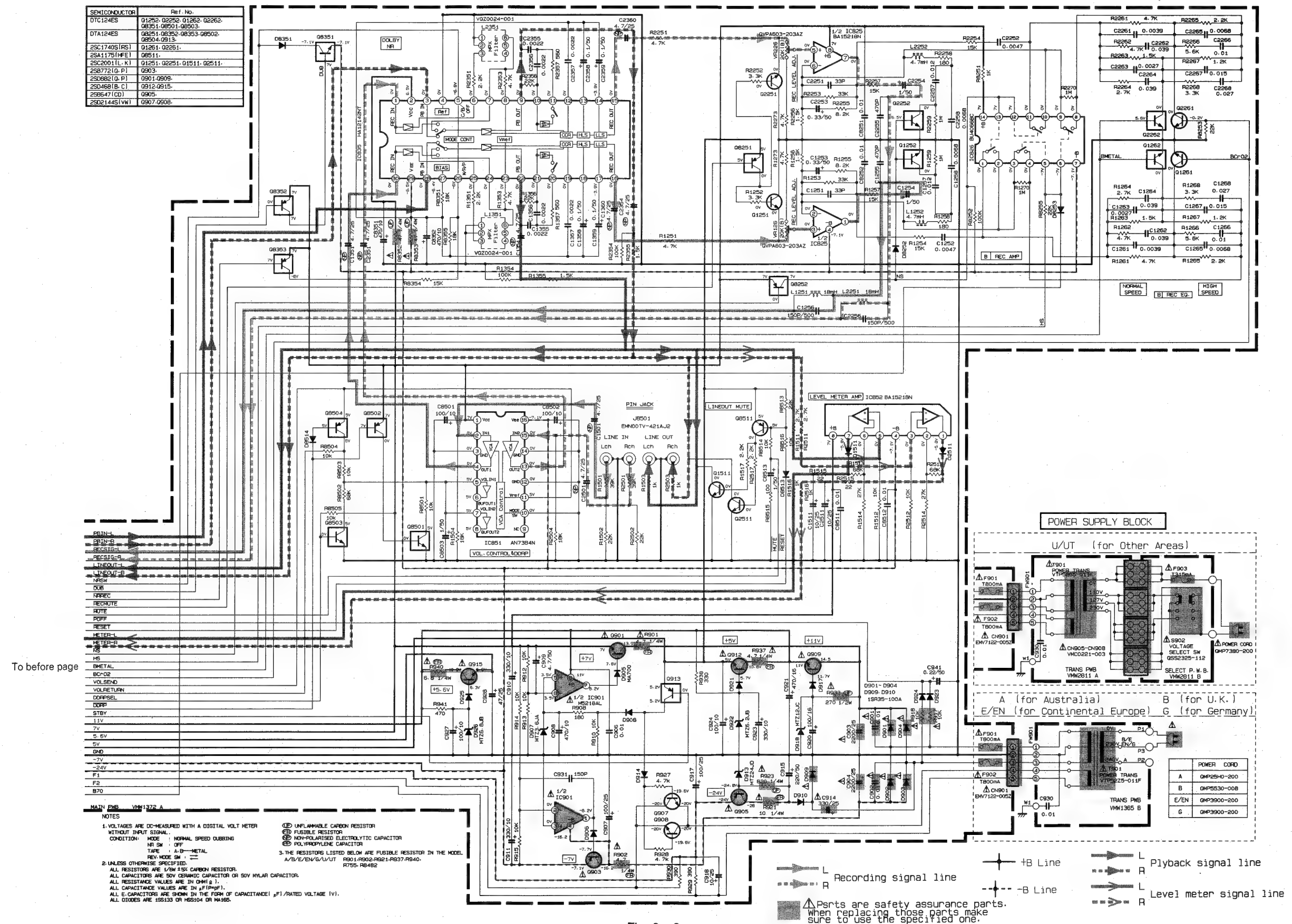
To next page

L Playback signal line (Deck A)
 L Playback signal line
 L Recording signal line
 L Level meter signal line
 L +B Line
 L -B Line
 L Parts are safety assurance parts.
 When replacing those parts make
 sure to use the specified one.

Fig. 6-2

■ A/B/E/EN/G/U/UT version

1 2 3 4 5 6 7 8 9 10



Note
VDH2344002BV

1

2

3

4

5

E

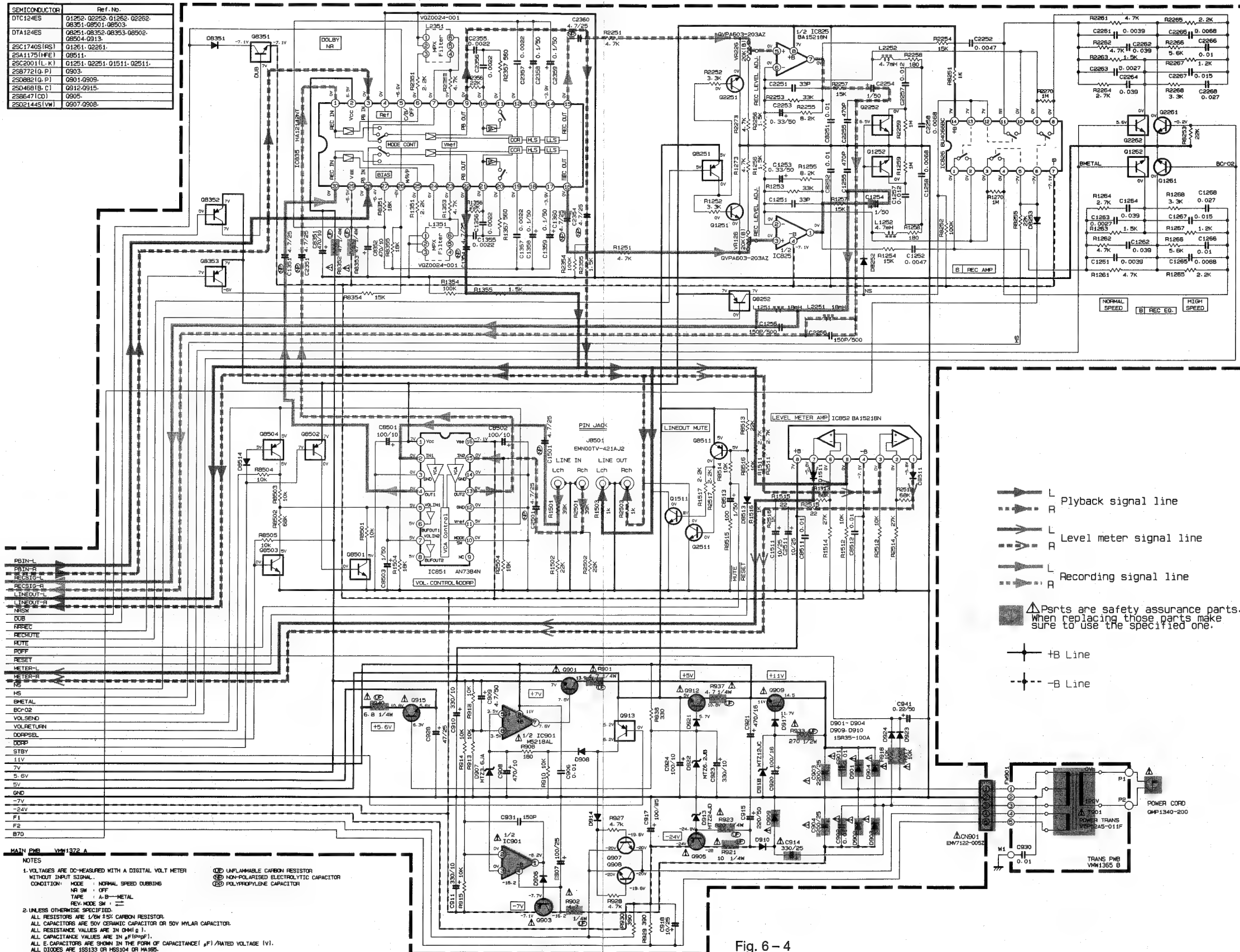
7







3


:



10

SEMICONDUCTOR	Ref. No.
D7C124ES	01252-02252-01262-02262-08301-08501-08503.
DTA124ES	08251-08352-08353-08502-08504-0913.
29C1740S (IRS)	01261-02261.
29A1175 (HFE)	08511.
29C2001 (L. K)	01251-02251-01511-02511.
258772 (Q. P)	0903.
25D882 (Q. P)	0901-0909.
25D468 (B. C)	0912-0915.
258647 (CD)	0905.
25D2144S (VM)	0907-0908.



 L Playback signal line
 R
 L Level meter signal line
 R
 L Recording signal line
 R

 Parts are safety assurance parts.
When replacing those parts make
sure to use the specified one.

 +B Line
 -B Line

To 10-E
on page 30

NOTES:

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT LOAD SHUNT.

CONDITION: MODE = NORMAL SPEED DUBBING
NR SM = OFF
TAPE = A B—METAL
REV. MODE SM =

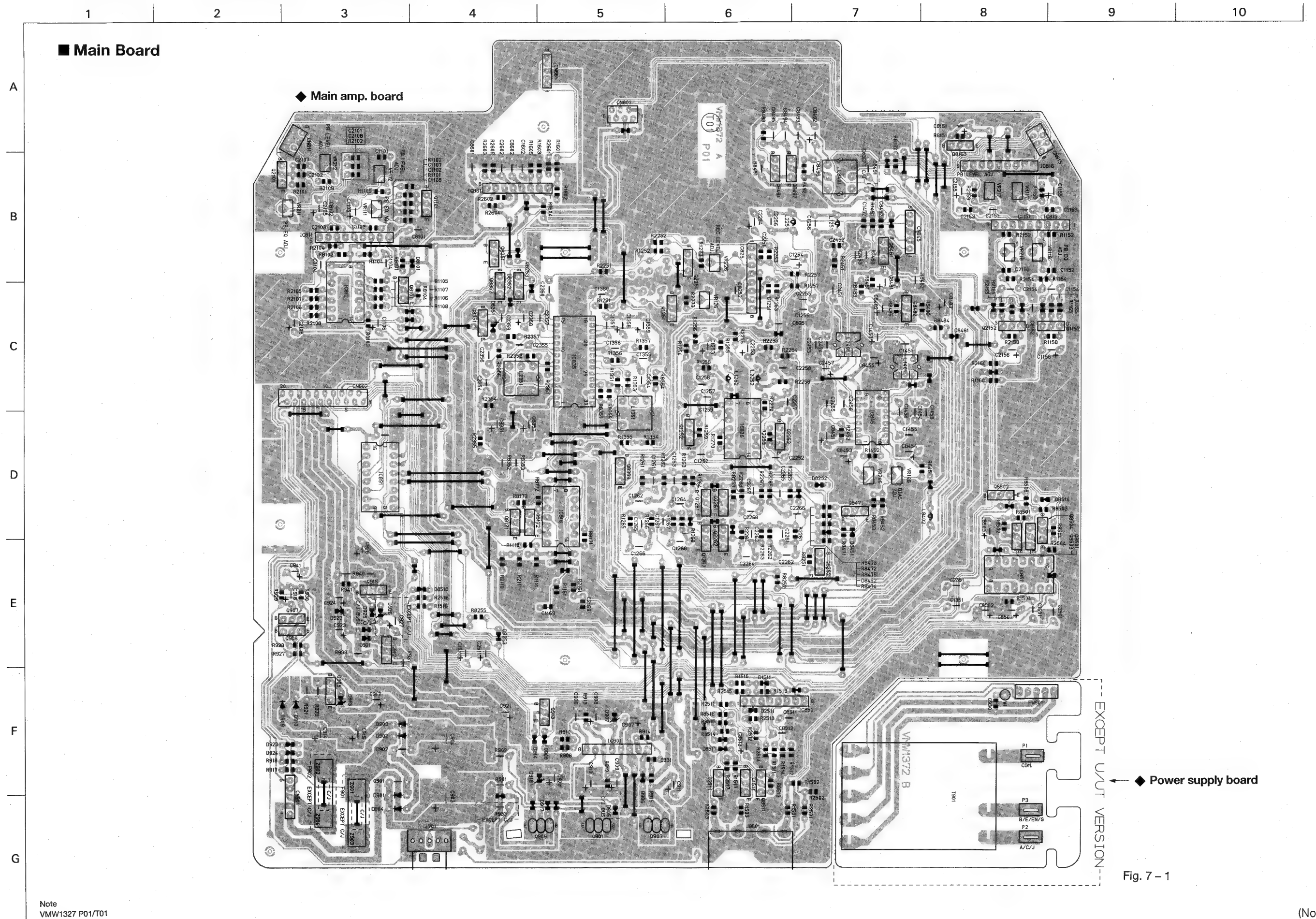
2. UNLESS OTHERWISE SPECIFIED:

ALL RESISTORS ARE 1/8W F&K CARBON RESISTORS.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM (g.).
ALL CAPACITANCE VALUES ARE IN PPF (p).
ALL E-CAPACITORS ARE IN THE FORM OF CAPACITANCE (PF) / RATED VOLTAGE (V).
ALL DIODES ARE 1SS133 OR HSS104 OR M458.

(X) UNFLAMMABLE CARBON RESISTOR
(X) NON-POLARIZED ELECTROLYTIC CAPACITOR
(X) POLYPROPYLENE CAPACITOR

Fig. 6-4

7 Location of P.C. Board Parts and Parts List



When replacing those parts, make sure to use the specified one.

BLOCK NO. 011111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C1262	QCC31EM-3932V	C.CAPACITOR	.039MF 20% 25V	
C1263	QCY31HK-272Z	C.CAPACITOR	2700PF 10% 50V	
C1264	QCC31EM-3932V	C.CAPACITOR	.039MF 20% 25V	
C1265	QCY31HK-682Z	C.CAPACITOR	6800PF 10% 50V	
C1266	QCC11EM-103V	C.CAPACITOR	.010MF 20% 25V	
C1267	QCC31EM-1532V	C.CAPACITOR	.015MF 20% 25V	
C1268	QCC31EM-2732V	C.CAPACITOR	.027MF 20% 25V	
C1351	QEN41EM-475	NP.E.CAPACITOR	4.7MF 20% 25V	
C1354	QEN41EM-475	NP.E.CAPACITOR	4.7MF 20% 25V	
C1355	QFN41HJ-222	M.CAPACITOR	2200PF 5% 50V	
C1356	QFN41HJ-222	M.CAPACITOR	2200PF 5% 50V	
C1357	QFN41HJ-222	M.CAPACITOR	2200PF 5% 50V	
C1358	QETC1HM-104ZN	E.CAPACITOR	.10MF 20% 50V	
C1359	QETC1HM-104ZN	E.CAPACITOR	.10MF 20% 50V	
C1360	QEN41EM-475	NP.E.CAPACITOR	4.7MF 20% 25V	
C1431	QFP32AJ-5612M	PP.CAPACITOR	560PF 5% 100V	
C1432	QCB31HK-101Y	C.CAPACITOR	100PF 10% 50V	
C1433	QCS11HJ-561	C.CAPACITOR	560PF 5% 50V	
C1434	C1-PART5838594	M.CAPACITOR	.010MF 5% 50V	
C1435	QFLC1HJ-2232M	M.CAPACITOR	.022MF 5% 50V	
C1436	QFLC1HJ-3932M	M.CAPACITOR	.039MF 5% 50V	
C1437	QET41EM-106	E.CAPACITOR	10MF 20% 25V	
C1501	QEN41EM-475	NP.E.CAPACITOR	4.7MF 20% 25V	
C1511	QET41EM-106	E.CAPACITOR	10MF 20% 25V	
C1601	QCF11HP-223	C.CAPACITOR	.022MF 20% 25V	
C1602	QCY31HK-222Z	C.CAPACITOR	2200PF 10% 50V	
C2101	QCB31HK-471Y	C.CAPACITOR	470PF 10% 50V	
C2102	QCB31HK-151Y	C.CAPACITOR	150PF 10% 50V	
C2103	QCB31HK-151Y	C.CAPACITOR	150PF 10% 50V	
C2104	C1-PART5838594	M.CAPACITOR	.010MF 5% 50V	
C2105	QET41AM-227	E.CAPACITOR	220MF 20% 10V	
C2106	QET41HM-475	E.CAPACITOR	4.7MF 20% 50V	
C2107	QCB31HK-471Y	C.CAPACITOR	470PF 10% 50V	
C2108	QCB31HK-151Y	C.CAPACITOR	150PF 10% 50V	
C2151	QFN41HJ-102	M.CAPACITOR	1000PF 5% 50V	
C2132	QCB31HK-331V	C.CAPACITOR	330PF 10% 50V	
C2133	QCB31HK-151Y	C.CAPACITOR	150PF 10% 50V	
C2134	QFN41HJ-123	M.CAPACITOR	.012MF 5% 50V	
C2155	QET41AM-227	E.CAPACITOR	220MF 20% 10V	
C2156	QET41HM-475	E.CAPACITOR	4.7MF 20% 50V	
C2169	QCB31HK-271Y	C.CAPACITOR	270PF 10% 50V	
C2251	QCS11HJ-330	C.CAPACITOR	33PF 5% 50V	
C2252	QFN41HJ-472	M.CAPACITOR	4700PF 5% 50V	
C2253	QETC1HM-334ZN	E.CAPACITOR	.33MF 20% 50V	
C2254	QET41HM-105	E.CAPACITOR	1.0MF 20% 50V	
C2255	QCS11HJ-471	C.CAPACITOR	470PF 5% 50V	
C2256	QCS32HJ-1512V	C.CAPACITOR	150PF 5% 500V	
C2257	QFN41HJ-123	M.CAPACITOR	.012MF 5% 50V	
C2258	QFN41HJ-682	M.CAPACITOR	6800PF 5% 50V	
C2261	QCY31HK-392Z	C.CAPACITOR	3900PF 10% 50V	
C2262	QCC31EM-3932V	C.CAPACITOR	.039MF 20% 25V	
C2263	QCY31HK-272Z	C.CAPACITOR	2700PF 10% 50V	
C2264	QCC31EM-3932V	C.CAPACITOR	.039MF 20% 25V	
C2265	QCY31HK-682Z	C.CAPACITOR	6800PF 10% 50V	
C2266	QCC11EM-103V	C.CAPACITOR	.010MF 20% 25V	

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
D 904	1SR35-100	SI DIODE		
D 905	MA700	ZENER DIODE		
D 906	1SS133	SI DIODE		
D 907	MT73-6JA	ZENER DIODE		
D 908	1SS133	SI DIODE		
D 909	1SR35-100	SI DIODE		
D 910	1SR35-100	SI DIODE		
D 913	MT724JD	ZENER DIODE		
D 914	1SS133	SI DIODE		
D 917	1SS133	SI DIODE		
D 918	MT12JC	ZENER DIODE		
D 921	1SS133	SI DIODE		
D 922	MT76.2JB	ZENER DIODE		
D 923	1SS133	SI DIODE		
D 924	1SS133	SI DIODE		
D 925	1SS133	SI DIODE		
D 926	MT76-8JB	ZENER DIODE		
D1511	1SS133	SI DIODE		
D2511	1SS133	SI DIODE		
D8101	1SR133	SI DIODE		
D8252	1SS133	SI DIODE		
D8253	1SS133	SI DIODE		
D8351	1SS133	SI DIODE		
D8451	1SS133	SI DIODE		
D8452	1SS133	SI DIODE		
D8481	1SS133	SI DIODE		
D8513	1SS133	SI DIODE		
D8514	1SS133	SI DIODE		
HS901	VNH4011-201	HEAT SINK		
IC811	AN6557F	IC	HEAD AMP-DECK A	
IC812	BU4066B	IC	EQ SELECT SW	
IC815	AN6557F	IC	HEAD AMP-DECK B	
IC816	UPC1330HA	IC	REC/PB SWITCH	
IC818	BU4066B	IC	A/B SIG.SELECT	
IC825	BA15218N	IC	REC AMP.	
IC826	BU4066B	IC	REC RQ AMP	
IC835	HA12142NT	IC	DOLBY NR AMP	
IC845	UPC1297CA	IC	HX PRO BIAS	
IC851	AN7384N	IC	VR-CONT/DDRPP	
IC852	BA15218N	IC	LEVEL METER AMP	
IC861	BA15218N	IC	H-PHONE AMP.	
IC891	M50253P	IC	PORTS EXPANDER	
IC901	M5218AL	IC	REGULATOR	
J8501	EMN001V-421A12	PIN JACK	PIN JACK	
J8601	QMS6032-V01	JACK		
L1251	VGP0001-183	INDUCTOR		
L1252	VGP0001-4722S	INDUCTOR		
L1351	VZ0024-001	FILTER	MPX FILTER	
L1401	VGH7001-021	OSC COIL (BIAS)		
L2251	VGP0001-183	INDUCTOR		
L2252	VGP0001-4722S	INDUCTOR		
L2351	VZ0024-001	FILTER		
L2401	VGH7001-021	OSC COIL (BIAS)		
L8401	VGH1008-031	OSC COIL (BIAS)		

△ Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

BLOCK NO. 01111111

△ REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
△ P 1	VMZ0034-001	TAB	FOR POWER CORD	
△ P 2	VMZ0034-001	TAB	FOR POWER CORD	
△ P 3	VMZ0034-001	TAB	FOR POWER CORD	
△ Q 901	2SD882(P,Q)	TRANSISTOR		
△ Q 903	2SB772(Q,P)	TRANSISTOR		
△ Q 905	2SB647(CD)	TRANSISTOR		
△ Q 907	2SD2144S(VW)	TRANSISTOR		
△ Q 908	2SD2144S(VW)	TRANSISTOR		
△ Q 909	2SD882(P,Q)	TRANSISTOR		
△ Q 912	2SD468(C)	TRANSISTOR		
△ Q 913	DTA124ES	TRANSISTOR		
△ Q 915	2SD468(C)	TRANSISTOR		
△ Q 1101	DTA124ES	TRANSISTOR		
△ Q 1152	2SK105(E,F,H)	TRANSISTOR(FET)		
△ Q 1251	2SC2001(L,K)	TRANSISTOR		
△ Q 1252	DTA124ES	TRANSISTOR		
△ Q 1261	2SC1740S(R,S)	TRANSISTOR		
△ Q 1262	DTA124ES	TRANSISTOR		
△ Q 1511	2SC2001(L,K)	TRANSISTOR		
△ Q 2101	DTA124ES	TRANSISTOR		
△ Q 2152	2SK105(E,F,H)	TRANSISTOR(FET)		
△ Q 2251	2SC2001(L,K)	TRANSISTOR		
△ Q 2252	DTA124ES	TRANSISTOR		
△ Q 2261	2SC1740S(R,S)	TRANSISTOR		
△ Q 2262	DTA124ES	TRANSISTOR		
△ Q 2311	2SC2001(L,K)	TRANSISTOR		
△ Q 8101	DTA124ES	TRANSISTOR		
△ Q 8163	DTA124ES	TRANSISTOR		
△ Q 8171	DTA124ES	TRANSISTOR		
△ Q 8172	DTA124ES	TRANSISTOR		
△ Q 8251	DTA124ES	TRANSISTOR		
△ Q 8252	DTA124ES	TRANSISTOR		
△ Q 8351	DTA124ES	TRANSISTOR		
△ Q 8352	DTA124ES	TRANSISTOR		
△ Q 8353	DTA124ES	TRANSISTOR		
△ Q 8471	2SC1740S(R,S)	TRANSISTOR		
△ Q 8481	2SC2001(L,K)	TRANSISTOR		
△ Q 8482	2SA1175	TRANSISTOR		
△ Q 8491	2SC2001(L,K)	TRANSISTOR		
△ Q 8492	2SC2001(L,K)	TRANSISTOR		
△ Q 8501	DTA124ES	TRANSISTOR		
△ Q 8502	DTA124ES	TRANSISTOR		
△ Q 8503	DTA124ES	TRANSISTOR		
△ Q 8504	DTA124ES	TRANSISTOR		
△ Q 8511	2SA1175	TRANSISTOR		
△ R 901	GRZ0077-4R7X	FUSE RESISTOR	4.7 5% 1/4W	A,B,E,EN
△ R 901	GRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	G,U,UT
△ R 901	GRD14CJ-4R7SX	UNF.-C. RESISTOR	4.7 5% 1/4W	C,J
△ R 902	GRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	G,U,UT
△ R 902	GRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	A,B,E,EN
△ R 902	GRD14CJ-4R7SX	CARBON RESISTOR	4.7 5% 1/4W	C,J
△ R 908	GRD161J-181	CARBON RESISTOR	180 5% 1/6W	
△ R 910	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
△ R 912	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
△ R 913	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	

△ REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
△ R 914	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
△ R 915	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
△ R 917	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
△ R 918	GRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
△ R 921	GRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	C,J
△ R 921	GRZ0077-100X	FUSE RESISTOR	10 5% 1/4W	G,U,UT
△ R 921	GRZ0077-100X	FUSE RESISTOR	10 5% 1/4W	A,B,E,EN
△ R 923	GRD14CJ-821SX	CARBON RESISTOR	820 5% 1/4W	
△ R 927	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
△ R 928	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
△ R 929	GRD161J-391	CARBON RESISTOR	390 5% 1/6W	
△ R 930	GRD161J-391	CARBON RESISTOR	390 5% 1/6W	
△ R 933	C1-PARTS90	CARBON RESISTOR	270 5% 1/4W	
△ R 937	GRD14CJ-4R7SX	CARBON RESISTOR	4.7 5% 1/4W	C,J
△ R 937	GRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	G,U,UT
△ R 937	GRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	A,B,E,EN
△ R 938	GRD161J-331	CARBON RESISTOR	330 5% 1/6W	
△ R 940	GRH144J-6R8	FUSE RESISTOR	6.8 5% 1/4W	A,B,E,EN
△ R 940	GRD14CJ-6R8SX	UNF.-C. RESISTOR	6.8 5% 1/4W	C,J
△ R 940	GRH144J-6R8	FUSE RESISTOR	6.8 5% 1/4W	G,U,UT
△ R 941	GRD161J-471	CARBON RESISTOR	470 5% 1/6W	
△ R 1101	GRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
△ R 1102	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
△ R 1104	GRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
△ R 1105	GRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
△ R 1106	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
△ R 1107	GRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
△ R 1108	GRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
△ R 1109	GRD161J-150	CARBON RESISTOR	15 5% 1/6W	
△ R 1110	GRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
△ R 1111	GRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
△ R 1152	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
△ R 1154	GRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
△ R 1155	GRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
△ R 1158	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
△ R 1159	GRD161J-150	CARBON RESISTOR	15 5% 1/6W	
△ R 1160	GRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
△ R 1161	GRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
△ R 1165	GRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
△ R 1251	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
△ R 1252	GRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
△ R 1253	GRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
△ R 1254	GRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
△ R 1255	GRD161J-822	CARBON RESISTOR	8.2K 5% 1/6W	
△ R 1256	GRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
△ R 1257	GRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
△ R 1258	GRD161J-181	CARBON RESISTOR	180 5% 1/6W	
△ R 1259	GRD161J-105	CARBON RESISTOR	1.0M 5% 1/6W	
△ R 1261	GRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
△ R 1262	GRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
△ R 1263	GRD161J-172	CARBON RESISTOR	1.7K 5% 1/6W	
△ R 1264	GRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
△ R 1265	GRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
△ R 1266	GRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
△ R 1267	GRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	

TD-W217TN/C/J
TD-W218BK/A/B/E/EN/G/U/UT

△Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R2261	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2262	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2263	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R2264	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R2265	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R2266	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R2267	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
R2268	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R2270	QRD161J-105	CARBON RESISTOR	1.0K 5% 1/6W	
R2273	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2351	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R2353	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2354	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R2355	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R2356	QRD161J-223	CARBON RESISTOR	2.2K 5% 1/6W	
R2357	QRD161J-561	CARBON RESISTOR	560 5% 1/6W	
R2451	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
R2453	QRD161J-533	CARBON RESISTOR	53K 5% 1/6W	
R2453	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	
R2501	QRD161J-393	CARBON RESISTOR	39K 5% 1/6W	
R2502	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R2503	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R2504	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R2511	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R2512	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R2513	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
R2514	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R2515	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
R2516	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R2517	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R2601	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
R2602	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R2603	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R2604	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R2605	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R8101	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R8102	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R8103	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R8104	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R8151	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R8152	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R8171	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R8172	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R8173	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R8251	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R8252	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R8253	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R8255	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R8351	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R8352	QRD145J-470S	CARBON RESISTOR	47 5% 1/4W	
R8353	QRD145J-470S	CARBON RESISTOR	47 5% 1/4W	
R8354	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
R8355	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R8451	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
R8452	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	

BLOCK NO. 01111111

REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R1268	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R1270	QRD161J-105	CARBON RESISTOR	1.0K 5% 1/6W	
R1273	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R1351	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
R1353	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R1354	QRD161J-104	CARBON RESISTOR	100K 5% 1/6W	
R1355	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R1356	QRD161J-223	CARBON RESISTOR	2.2K 5% 1/6W	
R1357	QRD161J-561	CARBON RESISTOR	560 5% 1/6W	
R1451	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
R1452	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
R1453	QRD14CJ-100SX	CARBON RESISTOR	10 5% 1/4W	
R1501	QRD161J-393	CARBON RESISTOR	39K 5% 1/6W	
R1502	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R1503	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R1504	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R1511	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
R1512	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R1513	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
R1514	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
R1515	QRD161J-220	CARBON RESISTOR	22 5% 1/6W	
R1516	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R1517	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
R1601	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
R1602	QRD161J-124	CARBON RESISTOR	120K 5% 1/6W	
R1603	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R1604	QRD161J-562	CARBON RESISTOR	5.6K 5% 1/6W	
R1605	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R2101	QRD161J-105	CARBON RESISTOR	1.0K 5% 1/6W	
R2102	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2104	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
R2105	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R2106	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2107	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R2108	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R2109	QRD161J-150	CARBON RESISTOR	15 5% 1/6W	
R2110	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
R2111	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
R2152	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2154	QRD161J-274	CARBON RESISTOR	270K 5% 1/6W	
R2155	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
R2158	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2159	QRD161J-150	CARBON RESISTOR	15 5% 1/6W	
R2160	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
R2161	QRD161J-123	CARBON RESISTOR	12K 5% 1/6W	
R2251	QRD161J-105	CARBON RESISTOR	1.0K 5% 1/6W	
R2251	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
R2252	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R2253	QRD161J-333	CARBON RESISTOR	33K 5% 1/6W	
R2254	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
R2255	QRD161J-322	CARBON RESISTOR	8.2K 5% 1/6W	
R2256	QRD161J-152	CARBON RESISTOR	1.5K 5% 1/6W	
R2257	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
R2258	QRD161J-181	CARBON RESISTOR	180 5% 1/6W	
R2259	QRD161J-105	CARBON RESISTOR	1.0K 5% 1/6W	

△Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

BLOCK NO. 03				
△ REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
R8453	QRD161J-392	CARBON RESISTOR	3.9K 5% 1/6W	
R8471	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R8472	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R8473	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R8474	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
R8475	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
R8481	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	C, J
R8482	QRD14CJ-4R7SX	CARBON RESISTOR	4.7 5% 1/4W	G, U, UT
△ R8482	QRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	A, B, E, EN
△ R8482	QRZ0077-4R7X	CARBON RESISTOR	4.7 5% 1/4W	
R8483	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R8484	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
R8485	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
R8486	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
R8491	QRD14CJ-6R8SX	CARBON RESISTOR	6.8 5% 1/4W	
R8492	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
R8493	QRD161J-823	CARBON RESISTOR	82K 5% 1/6W	
R8501	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R8502	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
R8503	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R8504	QRD161J-101	CARBON RESISTOR	10K 5% 1/6W	
R8505	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R8513	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
R8514	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
R8515	QRD161J-101	CARBON RESISTOR	10K 5% 1/6W	
R8516	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
VR111	QVPA601-104A	V.RESISTOR	A.PB EQ ADJ	
VR112	QVPA601-101	V.RESISTOR	A.PB LEVEL ADJ	
VR116	QVPA601-104A	V.RESISTOR	B.PB EQ ADJ	
VR117	QVPA601-101	V.RESISTOR	B.PB LEVEL ADJ	
VR126	QVPA601-203A	V.RESISTOR	B.REC LEVEL ADJ	
VR146	QVPA601-203A	V.RESISTOR	BIAS ADJ	
VR211	QVPA601-104A	V.RESISTOR	A.PB EQ ADJ	
VR212	QVPA601-101	V.RESISTOR	A.PB LEVEL ADJ	
VR216	QVPA601-104A	V.RESISTOR	B.PB EQ ADJ	
VR217	QVPA601-101	V.RESISTOR	B.PB LEVEL ADJ	
VR226	QVPA601-203A	V.RESISTOR	B.REC LEVEL ADJ	
VR246	QVPA601-203A	V.RESISTOR	BIAS ADJ	
△ Z 901	VMZ0087-001Z	FUSE CLIP	FOR F901, F902	
△ Z 902	VMZ0087-001Z	FUSE CLIP	FOR F901, F902	
△ Z 903	VMZ0087-001Z	FUSE CLIP	FOR F901, F902	
△ Z 904	VMZ0087-001Z	FUSE CLIP	FOR F901, F902	

■ Power Supply Board U/UT only

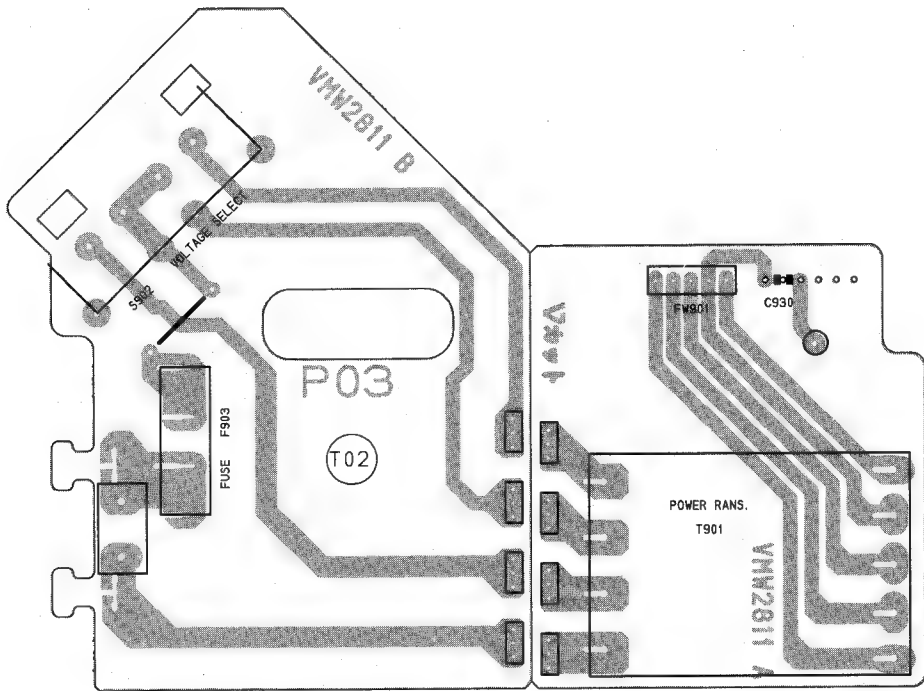


Fig. 7-2

● Power Supply Board Parts List (U/UT only)

BLOCK NO. 03				
△ REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
C 930	QCF11HP-103	C.CAPACITOR	.010MF +100%-0%	
△ CN905	VMC0221-003	CONNECTOR	BOARD CONNECTOR	
△ CN906	VMC0221-003	CONNECTOR	BOARD CONNECTOR	
△ CN907	VMC0221-003	CONNECTOR	BOARD CONNECTOR	
△ CN908	VMC0221-003	CONNECTOR	BOARD CONNECTOR	
△ S 902	QSS2325-112	SLIDE SWITCH	VOLTAGE SELECT	
△ Z 905	VMZ0043-001S	FUSE CLAMP	FOR F903	
△ Z 906	VMZ0043-001S	FUSE CLAMP	FOR F903	

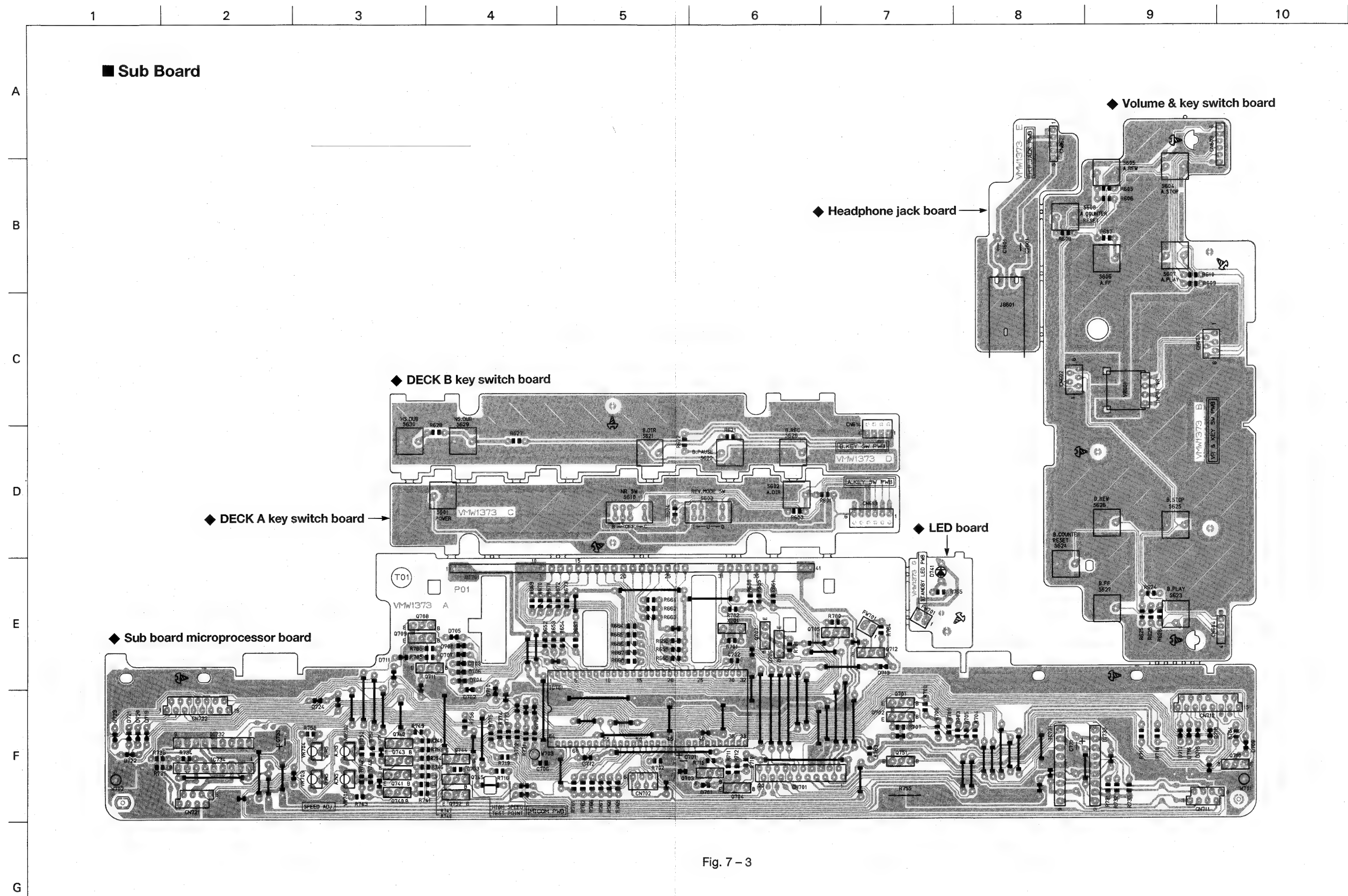


Fig. 7 - 3

● Sub Board Parts List

⚠Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

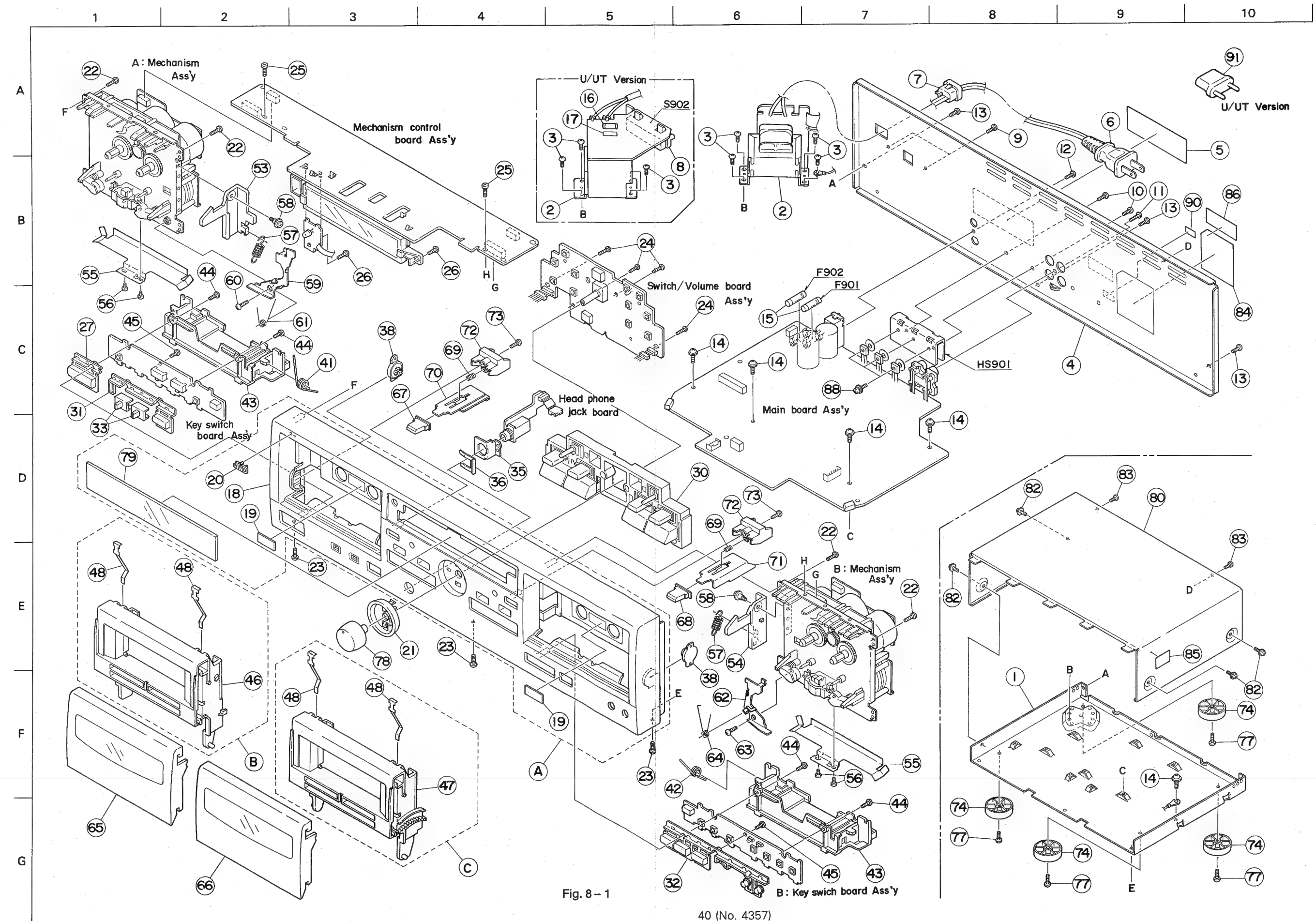
BLOCK NO. 02					SUFFIX
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	C 701	QET41AM-107	E.CAPACITOR	100MF 20% 10V	
	C 702	QCB11HK-471Y	C.CAPACITOR	470PF 10% 50V	
	C 703	QCB11HK-471Y	C.CAPACITOR	470PF 10% 50V	
	C 704	QCB11CM-472Y	C.CAPACITOR	4700PF 20% 16V	
	C 731	QET41EM-106	E.CAPACITOR	10MF 20% 25V	
	C 733	QET41EM-106	E.CAPACITOR	10MF 20% 25V	
	CN601	VMC0163-R06	CONNECTOR		
	CN602	VMC0163-R06	CONNECTOR		
	CN603	VMC0280-004	CONNECTOR		
	CN604	VMC0280-004	CONNECTOR		
	CN613	VMC0281-S06	CONNECTOR		
	CN614	VMC0281-S04	CONNECTOR		
	CN701	VMC0163-R20	CONNECTOR		
	CN702	VMC0163-R06	CONNECTOR		
	CN711	VMC0234-P08	CONNECTOR		
	CN712	VMC0234-P15	CONNECTOR		
	CN722	VMC0234-P15	CONNECTOR		
	D 701	1S5133	SI DIODE		
	D 702	1S5133	SI DIODE		
	D 703	1S5133	SI DIODE		
	D 704	1S5133	SI DIODE		
	D 705	1S5133	SI DIODE		
	D 706	1S5133	SI DIODE		
	D 707	1S5133	SI DIODE		
	D 708	1S5133	SI DIODE		
	D 709	1S5133	SI DIODE		
	D 710	1S5133	SI DIODE		
	D 711	1S5133	SI DIODE		
	D 712	1S5133	SI DIODE		
	D 713	1S5133	SI DIODE		
	D 715	1S5133	SI DIODE		
	D 716	1S5133	SI DIODE		
	D 717	1S5133	SI DIODE		
	D 718	1S5133	SI DIODE		
	D 719	1S5133	SI DIODE		
	D 720	1S5133	SI DIODE		
	D 721	1S5133	SI DIODE		
	D 722	1S5133	SI DIODE		
	D 723	1S5133	SI DIODE		
	D 724	1S5133	SI DIODE		
	D 741	SUR-55VCF08	LED		
	D1701	BJ561G	FL TUBE		
	IC701	MB88514B-1727T	IC	CPU	
	IC731	BA6218	IC	A.CAM MOTOR	
	IC732	BA6218	IC	B.CAM MOTOR	
	IC733	TAB409S	IC	A.REEL MOTOR	
	IC734	TAB409S	IC	B.REEL MOTOR	
	Q 701	2SC1740S(R,S)	TRANSISTOR		
	Q 702	2SC1740S(R,S)	TRANSISTOR		
	Q 703	DTA124ES	TRANSISTOR		
	Q 704	2SC1740S(R,S)	TRANSISTOR		
	Q 705	2SC1740S(R,S)	TRANSISTOR		
	Q 706	2SC1740S(R,S)	TRANSISTOR		
	Q 707	2SC1740S(R,S)	TRANSISTOR		

BLOCK NO. 02					SUFFIX
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	Q 708	DTA124ES	TRANSISTOR		
	Q 709	DTA124ES	TRANSISTOR		
	Q 710	2SC1740S(R,S)	TRANSISTOR		
	Q 711	2SC1740S(R,S)	TRANSISTOR		
	Q 712	DTA124ES	TRANSISTOR		
	Q 740	2SA1175	TRANSISTOR		
	Q 741	2SA1175	TRANSISTOR		
	Q 742	2SA1175	TRANSISTOR		
	Q 743	2SA1175	TRANSISTOR		
	Q 744	DTA124ES	TRANSISTOR		
	Q 745	DTA124ES	TRANSISTOR		
	Q 752	DTA124ES	TRANSISTOR		
	R 601	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 603	QRD161J-183	CARBON RESISTOR	18K 5% 1/6W	
	R 604	QRD161J-273	CARBON RESISTOR	27K 5% 1/6W	
	R 605	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 606	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
	R 607	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 608	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R 609	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 610	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 621	QRD161J-222	CARBON RESISTOR	2.2K 5% 1/6W	
	R 622	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 623	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R 624	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 625	QRD161J-122	CARBON RESISTOR	1.2K 5% 1/6W	
	R 626	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 627	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R 628	QRD161J-472	CARBON RESISTOR	4.7K 5% 1/6W	
	R 651	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 652	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 653	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 654	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 655	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 656	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 657	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 658	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 659	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 660	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 661	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 662	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 663	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 664	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 665	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 666	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 667	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 668	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 669	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 670	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 671	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 672	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 673	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 701	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R 702	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	

BLOCK NO. 02					SUFFIX
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 703	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 704	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 705	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 706	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 707	QRD161J-471	CARBON RESISTOR	470 5% 1/6W	
	R 708	QRD161J-272	CARBON RESISTOR	2.7K 5% 1/6W	
	R 709	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 710	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 711	QRD161J-473	CARBON RESISTOR	47K 5% 1/6W	
	R 712	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 715	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 716	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 717	QRD161J-102	CARBON RESISTOR	1.0K 5% 1/6W	
	R 718	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 719	QRD161J-221	CARBON RESISTOR	220 5% 1/6W	
	R 731	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 732	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 733	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 734	QRD161J-332	CARBON RESISTOR	3.3K 5% 1/6W	
	R 735	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 736	QRD161J-182	CARBON RESISTOR	1.8K 5% 1/6W	
	R 740	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 741	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 742	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R 743	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 745	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
	R 746	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 747	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 748	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 749	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 750	QRD161J-683	CARBON RESISTOR	68K 5% 1/6W	
	R 751	QRD161J-153	CARBON RESISTOR	15K 5% 1/6W	
	R 752	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 753	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	R 754	QRD161J-224	CARBON RESISTOR	220K 5% 1/6W	
	A R 755	QRH144J-487	FUSI.RESISTOR	4.7 5% 1/4W	G.U,UT
	A R 755	QRH144J-487SX	UNF.C.RESISTOR	4.7 5% 1/4W	C,J
	A R 755	QRH144J-487	FUSI.RESISTOR	4.7 5% 1/4W	A,B,E,EN
	R 756	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 761	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 762	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 764	QRD161J-103	CARBON RESISTOR	10K 5% 1/6W	
	R 765	QRD161J-151	CARBON RESISTOR	150 5% 1/6W	
	R 766	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 767	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 768	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 769	QRD161J-682	CARBON RESISTOR	6.8K 5% 1/6W	
	R 770	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 771	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 772	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 773	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 774	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 775	QRD161J-101	CARBON RESISTOR	100 5% 1/6W	
	R 780	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 781	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	

BLOCK NO. 02					SUFFIX
A	REF.	PARTS NO.	PARTS NAME	REMARKS	SUFFIX
	R 782	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 783	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 784	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 785	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	R 786	QRD161J-223	CARBON RESISTOR	22K 5% 1/6W	
	S 601	QS04H11-V01	TACT SWITCH	POWER	
	S 602	QS04H11-V01	TACT SWITCH	A DIRECTION	
	S 603	QS04H11-V01	SLIDE SWITCH	REV.MODE SW	
	S 604	QS04H11-V01	TACT SWITCH	A STOP	
	S 605	QS04H11-V01	TACT SWITCH	A REW	
	S 606	QS04H11-V01	TACT SWITCH	A FF	
	S 607	QS04H11-V01	TACT SWITCH	A PLAY	
	S 608	QS04H11-V01	TACT SWITCH	COUNTER RESET	
	S 610	QS04H11-V01	SLIDE SWITCH	DOLBY NR SW	
	S 621	QS04H11-V01	TACT SWITCH	B DIRECTION	
	S 622	QS04H11-V01	TACT SWITCH	B PAUSE	
	S 623	QS04H11-V01	TACT SWITCH	B PLAY	
	S 624	QS04H11-V01	TACT SWITCH	B COUNTER RESET	
	S 625	QS04H11-V01	TACT SWITCH	B STOP	
	S 626	QS04H11-V01	TACT SWITCH	B REW	
	S 627	QS04H11-V01	TACT SWITCH	B FF	
	S 628	QS04H11-V01	TACT SWITCH	B REC	
	S 629	QS04H11-V01	TACT SWITCH	N.S.DUB	
	S 630	QS04H11-V01	TACT SWITCH	H.S.DUB	
	VR601	QVGA12B-V06	V RESISTOR	INPUT VR	
	VR701	QVPE612-1032M	SEMI.V.RESISTOR	A.NORM SPEED AD	
	VR702	QVPE612-2032M	SEMI.V.RESISTOR	A-HIGH SPEED AD	
	VR703	QVPE612-1032M	SEMI.V.RESISTOR	B.NORM SPEED AD	
	VR704	QVPE612-2032M	SEMI.V.RESISTOR	B-HIGH SPEED AD	
	X 701	EFO-EC8004A4	CERAMIC RESONAT	(F=8MHZ)	
	Z 701	VYH3844-002	FL HOLDER		

8 Exploded View of Enclosure Component Parts



△Parts are safety assurance parts.

When replacing those parts,
make sure to use the specified one.

● Enclosure Component Parts List

BLOCK NO. M1MM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	ZCTDW218K-FB	FRONT PANEL ASS	N018-20,79	1		
		ZCTDW217J-FTN	FRONT PANEL ASS	N018-20,79	1		
	B	ZCTDW217K-CH-A	CASSETTE HOLDER	NO.46,48-52	1		
	C	ZCTDW217K-CH-B	CASSETTE HOLDER	NO.47-52	1		
	1	VKL1333-009	CHASSIS BASE		1		
△	2	VTP52G5-011F	POWER TRANS.		1	U,UT	
△		VTP52A5-011F	POWER TRANS.		1	C,J	
△		VTP52Z5-011F	POWER TRANS.		1	A,B,E,EN,G	
	3	SBST3006Z	SCREW	FOR POWER TRANS	4		
	4	VJC2410-053	REAR PANEL		1	A,B,E,EN,G	BK
		VJC2410-054	REAR PANEL		1	U,UT	BK
		VJC2410-051	REAR PANEL		1	C,J	TN
	5	VND4999-001	FCC LABEL (3)		1	J	
△	6	QMP7380-200	POWER CORD		1	U,UT	
△		QMP3900-200	POWER CORD		1	E,EN,G	
△		QMP1340-200	POWER CORD		1	C,J	
△		QMP5530-008BS	POWER CORD		1	B	
△		QMP2560-244	POWER CORD		1	A	
	7	QHS3771-108	CORD STOPPER		1		
	8	VKS5011-001	VOLTAGE CONTACT		1	U,UT	
	9	SBSF3008M	SCREW	FOR VOLTAGE SW	2	U,UT	
	10	SBSF3008M	SCREW	FOR HEAT SINK	2		
	11	SBSF3008M	SCREW	FOR PIN JACK	1		
	12	SBSF3008M	SCREW	FOR DCS JACK	1		
	13	SBST3006M	SCREW	FOR REAR+CHASSI	3		
△	14	GBST3006Z	SCREW	FOR MAIN BOARD	4		
△	15	QMF51E2-R80SBS	FUSE	F901,F902	2	B	
△		QMF51E2-R80SBS	FUSE	F901,F902	2	A,E,EN,G,U,J	
△	16	QMF51A2-R315	FUSE	F903,(315MA)	1	U,UT	
	17	VND4003-074	FUSE LABEL	FOR F903	1	U,UT	
	18	VJG1320-010UL	FRONT PANEL		1	C,J	TN
		VJG1320-011	FRONT PANEL		1	U,UT,G	BK
		VJG1320-011	FRONT PANEL		1	A,B,E,EN	BK
	19	VJD4024-002	REFLECTION PLAT		2		
	20	VJD5429-001	JVC MARK		1		
	21	VYH7943-002	RING	INPUT VOLUME	1		BK
		VYH7943-001	RING	INPUT VOLUME	1		TN
	22	SBSF3010Z	SCREW	FOR MECHANISM	4		
	23	SBST3006M	SCREW	FOR FRONT PANEL	3		
	24	SBSF2610Z	SCREW	FOR FRONT BOARD	4		
	25	SDST2604Z	SCREW	FOR FL PWB+MECH	2		
	26	SBSF2610Z	SCREW	FOR FL HOL+F.P.	2		
	27	VXP5288-002	PUSH BUTTON	POWER	1		BK
		VXP5288-001	PUSH BUTTON	POWER	1		TN
	30	VXP2098-006	MECHA BUTTON	A,B PLAY/STOP	1		BK
		VXP2098-005	MECHA BUTTON	A,B PLAY/STOP	1		TN
	31	VXP3688-004	MECHA BUTTON	A DIRECTION	1		BK
		VXP3688-003	MECHA BUTTON	A DIRECTION	1		TN
	32	VXP3689-004	MECHA BUTTON	B REC/PAUSE/DOL	1		BK
		VXP3689-003	MECHA BUTTON	B REC/PAUSE/DOL	1		TN
	33	C1-PARTS828390	SLIDE KNOB	REV.MODE	2		BK
		VXS4398-002	SLIDE KNOB	REV.MODE	2		TN
	35	VKL7264-003	JACK BRACKET	FPR P.H. JACK	1		
	36	VKL6752-001	SNAP PLATE		1		
	38	VYH7779-00B	DUMPER ASS'Y		2		

BLOCK NO. M1MM 111

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	41	VKW3006-236	TORSION SPRING	A-HOLDER	1		
	42	VKW3006-237	TORSION SPRING	B-HOLDER	1		
	43	VYH2300-002	MECHA HOLDER	FOR A B MECHA	2		
	44	SBSF2610Z	SCREW	FOR MECHANISM B	4		
	45	SBSF2610Z	SCREW	A B MECHA BOARD	2		
	46	VJT2317-007	CASSETTE HOLDER	FOR A-MECHA.	1		
	47	VJT2317-008	CASSETTE HOLDER	FOR B-MECHA.	1		
	48	VKY4180-001	CASSETTE SPRING		4		
	53	VYH7941-003	LOCK LEVER(L)	FOR A MECHA	1		
	54	VYH7941-004	LOCK LEVER(R)	FOR B MECHA	1		
	55	VMA4643-001	SHIELD	FOR MECHA	2		
	56	SDST2603Z	SCREW	FOR MECHA+SHIEL	4		
	57	VKW5199-001	TENSION SPRING	FOR LOCK LEVER	2		
	58	VKZ4749-001	SPECIAL SCREW	FOR LOCK L+MECH	2		
	59	VKL7293-001	EJECT SAFTY(R)		1		
	60	SBSF3010Z	SCREW	FOR E.SAFTY(R)	1		
	61	VKW5069-002	TORSION SPRING	FOR E.SAFTY(R)	1		
	62	VKL7663-001	EJECT SAFTY(L)		1		
	63	SBSF3010Z	SCREW	FOR E.SAFTY(L)	1		
	64	VKW5104-003	TORSION SPRING	FOR E.SAFTY(L)	1		
	65	VJT2349-009	CASSETTE LID	FOR A MECHA.	1		BK
		VJT2349-007	CASSETTE LID	FOR A MECHA	1		TN
	66	VJT2349-010	CASSETTE LID	FOR B MECHA.	1		BK
		VJT2349-008	CASSETTE LID	FOR B MECHA	1		TN
	67	VXP5289-003	PUSH BUTTON	FOR EJECT	1		BK
		VXP5289-001	PUSH BUTTON	FOR EJECT	1		TN
	68	VXP5289-004	PUSH BUTTON	FOR EJECT	1		BK
		VXP5289-002	PUSH BUTTON	FOR EJECT	1		TN
	69	VKW3001-077	C.SPRING		2		
	70	VKL7262-002	REMOTE ARM	FOR A-MECHA	1		
	71	VKL7263-002	REMOTE ARM	FOR B-MECHA	1		
	72	VYH7773-001	BUTTON HOLDER		2		
	73	SBSF2610Z	SCREW	FOR B.H.+F.P.	2		
	74	E406379-008SS	FOOT ASS'Y		4		BK
		VJF4039-00E	FOOT ASS'Y		4		TN
	77	SBST3008Z	SCREW	FOR FOOT	4		
	78	VXL3025-002	KNOB	INPUT VOLUME	1		BK
		VXL3025-001	KNOB	INPUT VOLUME	1		TN
	79	VJK3652-003	FINDER		1		BK
		VJK3652-001	FINDER		1		TN
	80	VJC1964-202	TOP COVER		1		BK
		VJC1964-201	TOP COVER		1		TN
	82	VKZ4614-001	SPECIAL SCREW	FOR TOP COVER	4		
	83	SBST3006M	SCREW	FOR TOP COVER	2		
	84	VYN2345-M007PA	NAME PLATE		1	U,UT	
		VYN2344-M006PA	NAME PLATE		1	J	
		VYN2345-M008PA	NAME PLATE		1	G	
		VYN2345-M005PA	NAME PLATE		1	E,EN	
		VYN2344-M104PA	NAME PLATE		1	C	
		VYN2345-M002PA	NAME PLATE		1	B	
		VYN2345-M003PA	NAME PLATE		1	A	
	85	VYN2344-901	NAME PLATE		1	UT	
	86	VND4992-001	ORIGN LABEL		1	UT	
	88	DPSP3008Z	SCREW	Q901,Q903,Q909	3		

⚠ Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

BLOCK NO. MIMM

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	90	E407097-001	HYATT L.LABEL		1	J	
	91	V04062-001	CONTI.PLUG		1	U,UT	
	HS901	VMH4011-201	HEAT SINK		1		
△	S 902	QSS2325-112	SLIDE SWITCH		1	U,UT	

9 Exploded View of Mechanism Component Parts

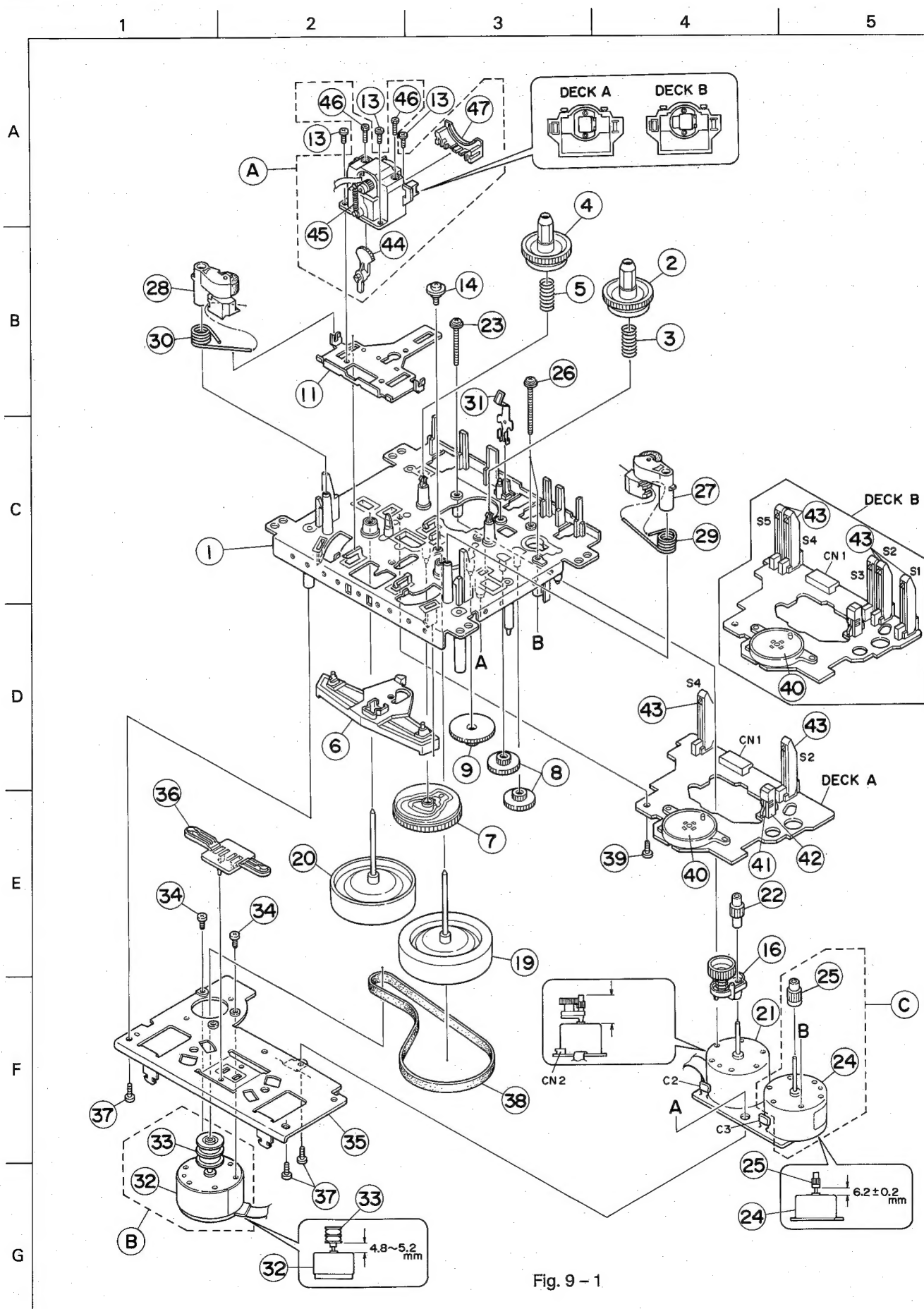


Fig. 9 - 1

△Parts are safety assurance parts.
When replacing those parts,
make sure to use the specified one.

● Mechanism Component Parts List

BLOCK NO. **M2MM**

△	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
	A	VKS3629-00E	H.MOUNT ASS'Y	DECK B	1		
		VKS3626-00E	HEAD MOUNT ASSY	DECK A	1		
	B	MSI5B2LW-SA2	DC MOTOR ASS'Y	NO.32-33	1		
	C	MSN5D257A-SA1	DC MOTOR ASS'Y	NO.24-25	1		
	1	VKS1126-00B	CHASSIS B ASS'Y		1		
	2	VKS5428-00C	T-UP REEL ASSY		1		
	3	VKW5043-001	B.T. SPRING		1		
	4	VKS3617-003	REEL		1		
	5	VKW5043-001	B.T. SPRING		1		
	6	VKS3627-002	PINCH LEVER		1		
	7	VKS2224-002	CONTROL CAM		1		
	8	VKS5454-001	ACT GEAR(2)		2		
	9	VKS5455-001	ACT GEAR(3)		1		
	11	VKM3632-001	HEAD BASE		1		
	13	SDST2004Z	SCREW		3		
	14	VKZ4708-001	SPECIAL SCREW		1		
	16	VKS5430-00CMM	FR ARM ASS'Y		1		
	19	VKF3195-00A	FLYWHEEL(R)ASS'		1		
	20	VKF3197-00A	FLYWHEEL(L)ASS'		1		
	21	MMN-6F4RA38	D.C.MOTOR	FOR REEL,MOTOR	1		
	22	VKS5432-001	REEL MOT. GEAR		1		
	23	VKZ4705-001	SPECIAL SCREW		2		
	24	MSN-5D257A	D.C.MOTOR	FOR ACT,MOTOR K	1		
	25	VKS5433-001	ACT.MOTOR GEAR		1		
	26	VKZ4705-002	SPECIAL SCREW		2		
	27	VKP4227-00B	PINCH R.(R) ASY		1		
	28	VKP4229-00B	PINCH R.(L) ASY		1		
	29	VKW5045-003	P.R. SP.(R)	FOR PINCH (R)	1		
	30	VKW5046-003	P.R. SP.(L)	FOR PINCH (L)	1		
	31	VKY4670-001	CASSETTE SPRING		1		
	32	MSI-5B2LW	D.C.MOTOR	FOR CAP,MOTOR K	1		
	33	VKR4632-003MM	MOTOR PULLEY		1		
	34	SPSP2603Z	SCREW		2		
	35	VKM3636-002	FM. BRACKET		1		
	36	VKS5327-005MM	THRUST PLATE		1		
	37	SDSF2608Z	SCREW		3		
	38	VKB3001-067	BELT		1		
	39	SDST2612Z	SCREW		1		
	40	VKS3616-00A	CAM SW UNIT	S6	1		
	41	DN6851-HI	HALL IC		1		
	42	VKS3630-001MM	IC HOLDER	IC1	1		
	43	MXS00220MVLO	CASSETTE SWITCH	S1,S2,S3,S4,S5	5		
		MXS00220MVLO	CASSETTE SWITCH	S2,S4 DECK A	2		
	44	VKS3614-001	TURN OVER GEAR		1		
	45	VKW5063-003	HEAD SPRING		1		
	46	VKZ4629-003	SPECIAL SCREW		2		
	47	VKS3654-001	HEAD MT. COVER		1		
C	2	QFV41HJ-104ZM	TF CAPACITOR	C2,C3	2		
CN	1	VMC0234-R15	CONNECTOR	CN1	1		
CN	2	VMC0234-R08	CONNECTOR	CN2	1		

10 Packing Illustration and packing parts list

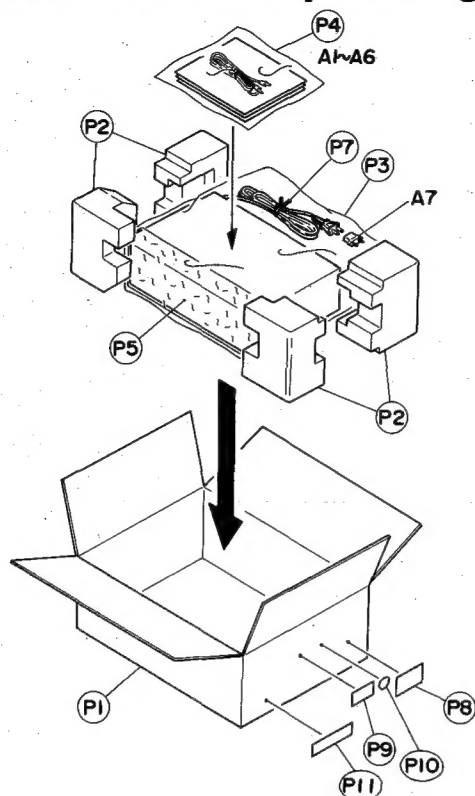


Fig. 10 - 1

● Packing Parts List

BLOCK NO. M3MM

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
P 1	VPC2344-M002	CARTON	TD-W217TN	1		
P 2	VPC2345-M002	CARTON	TD-W218BK	1		
P 3	TDWR803-NZ	CUSHION ASS'Y		1		
P 4	E300196-031B	ENVELOPE	FOR SET	1		
P 5	VPE3005-007	POLY BAG	FOR INSTRUCTION	1		
P 6	VPK3001-012	SHEET		1		
P 7	Q04141H	WIRE CLAMP		1		
P 8	-----	SIRIAL TICKET		1		
P 9	-----	EAN/UPC LABEL		1		
P 10	QZLA001-011	MARK		1	E, EN, G	
P 11	VND4909-001	VOLTAGE LABEL		1	U, UT	

● Accessories

BLOCK NO. M3MM

REF.	PARTS NO.	PARTS NAME	REMARKS	QTY	SUFFIX	CLR
A 1	VMP0039-000	PIN CORD		1		
A 2	VNN2344-671M	INSTRUCTIONS		1	B, A, J	
	VNN2344-661M	INSTRUCTIONS		1	C, E, EN, U, UT	
	VNN2344-271M	INSTRUCTIONS		1	G, EN	
A 3	BT-20134	WARRANTY CARD		1	G	
	BT-20025M	WARRANTY CARD		1	C	
	BT-20047F	WARRANTY CARD		1	J	
	BT-56001-1	WARRANTY CARD		1	A	
	BT20060	WARRANTY CARD		1	B	
	BT-20066A	WARRANTY CARD		1	B	
A 4	BT-56002-1	SERVIS CENTER L		1	A	
	BT-20137	SERVICE NETWORK		1	J	
	BT-20071B	SVC CENTER LIST		1	C	
A 5	BT-20044G	SAFETY INST.		1	J	
	E43486-340A	SAFETY I. SHEET		1	B	
A 6	EWP805-001E	REMOTE WIRE		1		
A 7	V04062-001	CONTI. PLUG		1	U, UT	

JVC

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